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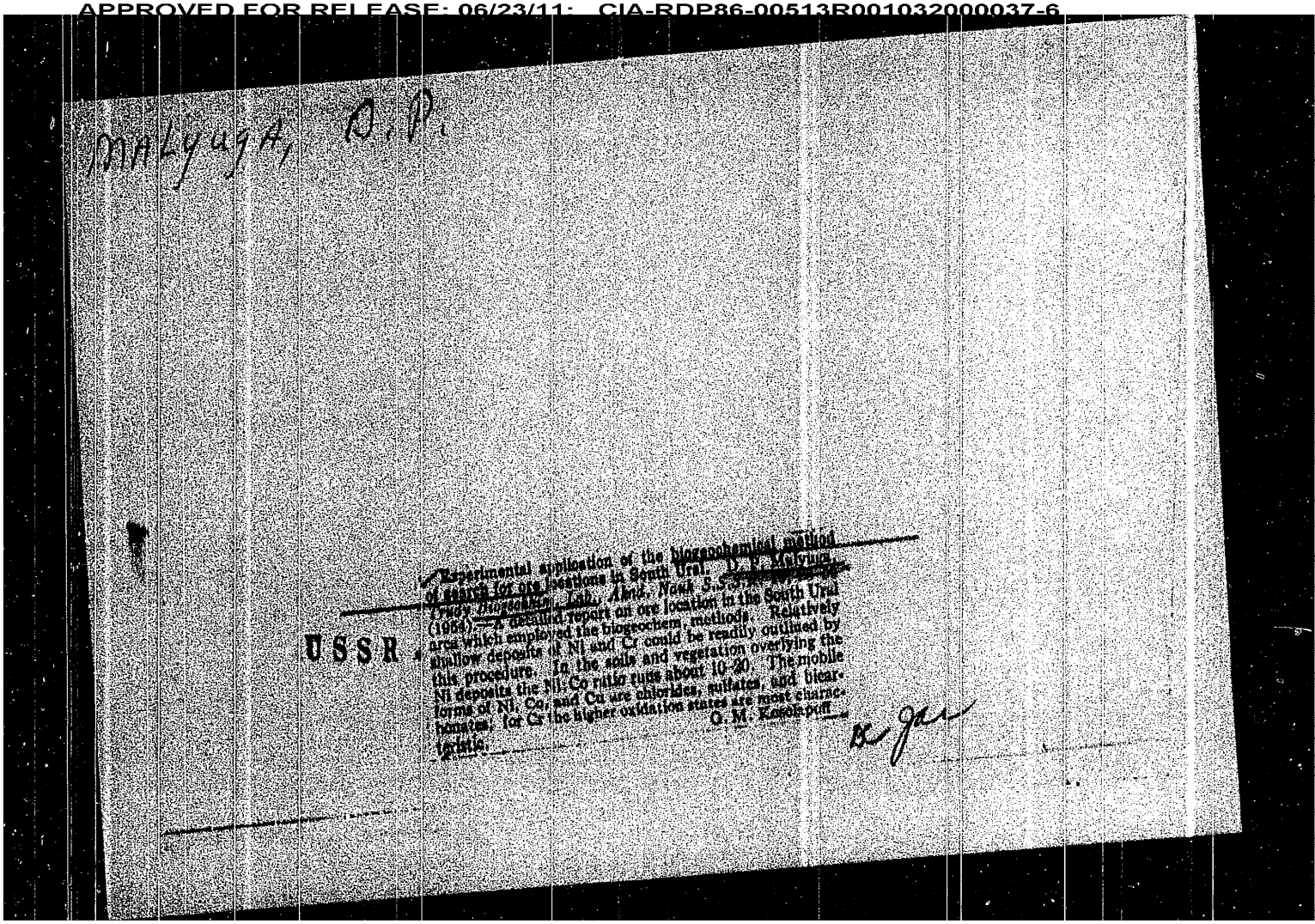

USSR

Experimental application of the biogeochemical method of search for ore locations in South Ural. [illegible]
Trudy Biogeokhim. Lab., Akad. Nauk S.S.S.R. 8, 5-[illegible] (1954).—A detailed report on ore location in the South Ural area which employed the biogeochem. methods. Relatively shallow deposits of Ni and Cr could be readily outlined by this procedure. In the soils and vegetation overlying the Ni deposits the Ni:Co ratio runs about 10-20. The mobile forms of Ni, Co, and Cu are chlorides, sulfates, and bicarbonates; for Cr the higher oxidation states are most characteristic.

G. M. Kosobutskii

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MALYUGA, D. P.

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Analytical Chemistry

Simultaneous polarographic determination of vanadium and chromium. D. P. Malyuga. *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 4(7), 96–115(1952).—A method of simultaneous polarographic detn. of V and Cr is described. For trivalent V, $E_{d.e}$ was −0.503 v., for trivalent Cr $E_{d.e}$ was −0.813 v., referred to the satd. calomel electrode. The consts. of diffusion current, detd. by reduction of $V(SCN)_3$ and $Cr(SCN)_3$, were for V 1.92 microamp. (at $m^{2/3}t^{1/6}$ = 1.48 mg.$^{2/3}$ sec.$^{-1/2}$) and for Cr 1.75 microamp. (at $m^{2/3}t^{1/6}$ = 1.47 mg.$^{2/3}$ sec.$^{-1/2}$). The mechanism of reduction was studied. One part of V could be detd. in 8 parts of Cr and vice versa. Zn, Co, Mn, and Al do not interfere. Cu, Fe, and Ni must be sepd. by a suitable method. The best soln. for the reduction of trivalent V and Cr was 0.5*N* KSCN, 1.0*N* AcOH, and 0.004% agar. The pH should be 4–6.5. The mechanisms were studied by solving Ilkovic's equation for *n*, the no. of electrons involved in the reduction of one ion. The coeffs. of diffusion had to be calcd. from Nernst's equation, which required the equiv. conductivities of V^{3+}, SCN^- and Cr^{3+}, SCN^- at infinite diln. For prepn. of $V(SCN)_3$, SO_2 was bubbled through a warm, dil. H_2SO_4 soln. of NH_4VO_3 to form $VOSO_4$. The SO_2 was removed by blowing H through the soln. and $Na_2S_2O_4$ was added to form $V_2(SO_4)_3$. To this soln. *N* KSCN was added and the soln. was heated to boiling under a current of H. $V(SCN)_3$ was extd. by ether, and the ether was removed under a vacuum. $Cr(SCN)_3$ was prepd. similarly from K_2CrO_4, but the addn. of $Na_2S_2O_4$ was omitted. The equiv. conductivities of 0.001*M* soln. of $V(SCN)_3$ and $Cr(SCN)_3$ were detd. From these conductivities were calcd. coeffs. of diffusion at 25°, for trivalent V 2.96×10^{-6} cm^2 sec.$^{-1}$, for trivalent Cr 2.65×10^{-6} cm^2 sec.$^{-1}$. Final calcn. showed that at a Hg cathode trivalent V was reduced to bivalent V and trivalent Cr to bivalent Cr. — Eurilla Mayerle

J

10-7-54

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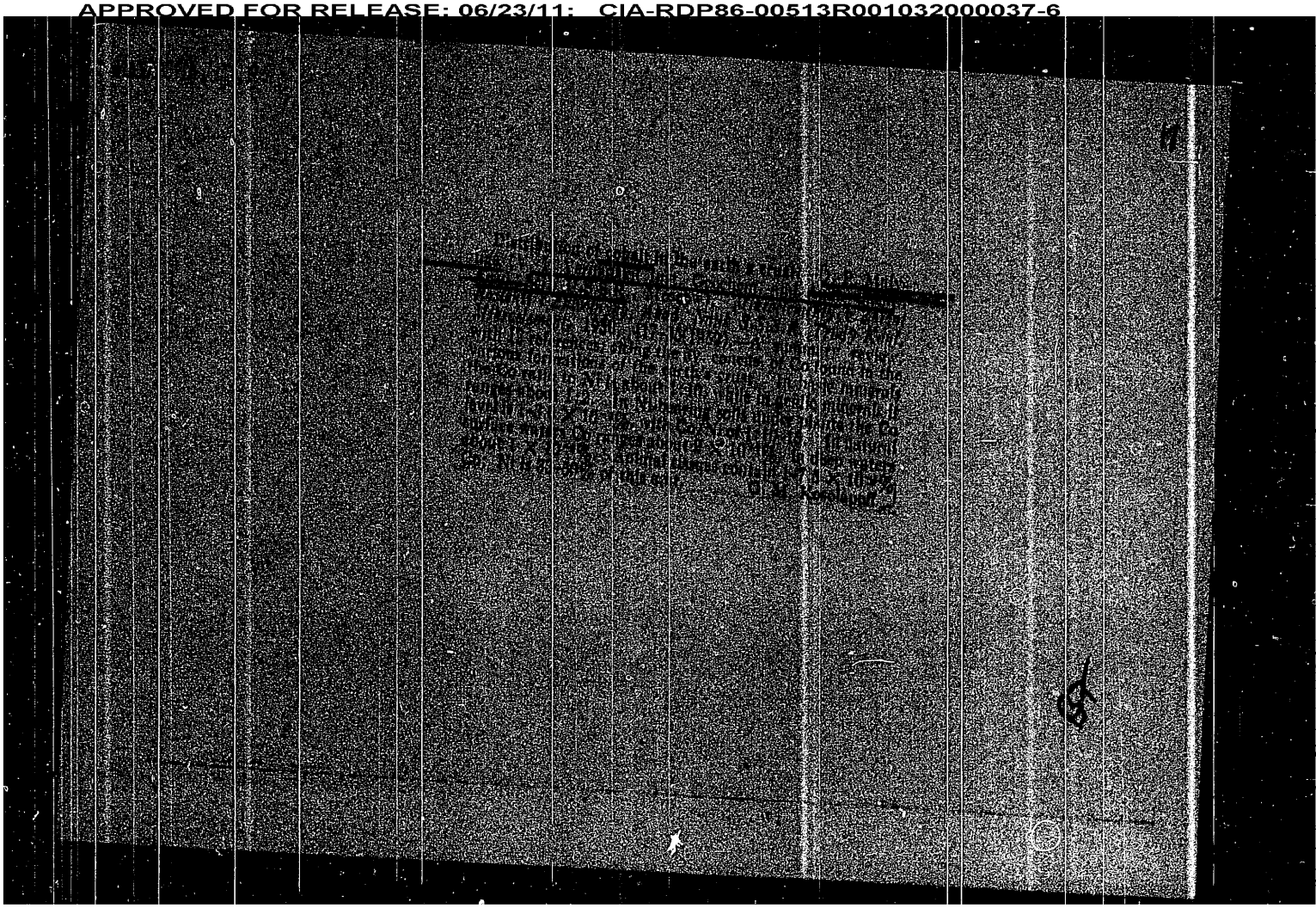

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MALYUGA, D.P.

Simultaneous polarographic determination of vanadium and chromium.
Trudy Kom. anal. khim. 4:96-115 '52. (MIRA 11:6)
(Vanadium) (Chromium) (Polarography)

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CA

15

Experimental use of soil-flora method of exploration in Transural steppe provinces. D. P. Malyuga. *Dokady Akad. Nauk S.S.S.R.* **76**, 231–3 (1951). Field studies showed that plants growing above deposits of Ni, Co, Cr, and Cu show a sharp change of the relations between Ni, Co, and other elements of the Fe family, which may be used as an indication of such ore deposits. In the present papers results with Ni silicate ores are described. The analyses of soils in these locations give 0.36–0.007% Ni, the higher values are accompanied by abnormally low Co (10–12 times lower than Ni), whereas usual Co/Ni ratio in soils rarely departs beyond 1:3 ratio; Cu is within normal limits. The content of Ni in plants in such locations is somewhat above normal and follows the soil levels qualitatively.

G. M. Kosolapoff

1951

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C/

118

Biogeochemical provinces in Southern Ural. D. P. Malyuga. *Doklady Akad. Nauk S.S.S.R.* **70**, 257-9 (1950).—In Ni-bearing regions of Southern Ural unusually high levels of Ni, Co, and Cu are found in the soils, plants, and animals. In the soils av. values found are: Co 0.017%, Ni 0.25, Cu 0.01; in ash of typical plants (*Linosyris villosa*) 0.0018, 0.018, 0.01, resp., in ash of *Stipa iohannis* 0.00025, 0.0008, and 0.005, resp. Among the plants malformed species are found, such as white petal-less *Anemone patens*, contg. high amts. of Ni. Grain plants contain much less Ni and do not produce malformed plants. Many common animals show malignant changes as shown by internal ulcers, modifications of the liver, and changes in blood compn. (undescribed). The effects are briefly discussed in terms of biogeochemistry. G. M. Kosolapoff

Inst. Geochem. and Analytic Chem. imeni V. I. Vernadskiy; Acad. Sci.

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PA 1/50T79

MALYUGA, D. P.

USSR/Metals - Cobalt
Nickel

Aug 49

"Compounds of Cobalt, Nickel, Copper and Other Elements of the Ferrous Family in the Sediments of the Black Sea," D. P. Malyuga, Inst of Geochem and Anal Chem imeni V. I. Vernadskiy, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 6

Study of various types of silts of the Black Sea at various depths showed that the concentration of cobalt fluctuated between $3.5 \cdot 10^{-4}$ and $1.6 \cdot 10^{-3}$, of nickel, between $1.0 \cdot 10^{-3}$ and $1.3 \cdot 10^{-2}$, and copper, between [redacted]

1/50T79

USSR/Metals - Cobalt (Contd) Aug 49

$3.0 \cdot 10^{-3}$ and $2.0 \cdot 10^{-2}$. Concentrations of iron and magnesium were considerably greater in all cases, but were greatly reduced in limy silts.

Submitted by Acad D. S. Belyankin 15 Jun 49.

1/50T79

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MALYUGA, D. F.

"On the Question Concerning the Correlation of the Perm Variegated Flowers According to Their Content of Cobalt, Nickel, Copper and Other Elements of the Iron Group," Dok. AN, 58, No. 8, 1947.

"The Inter-Relation Between Elements of the Iron Family in Erupted Rocks," Dok.AN, 58, No. 9, 1947

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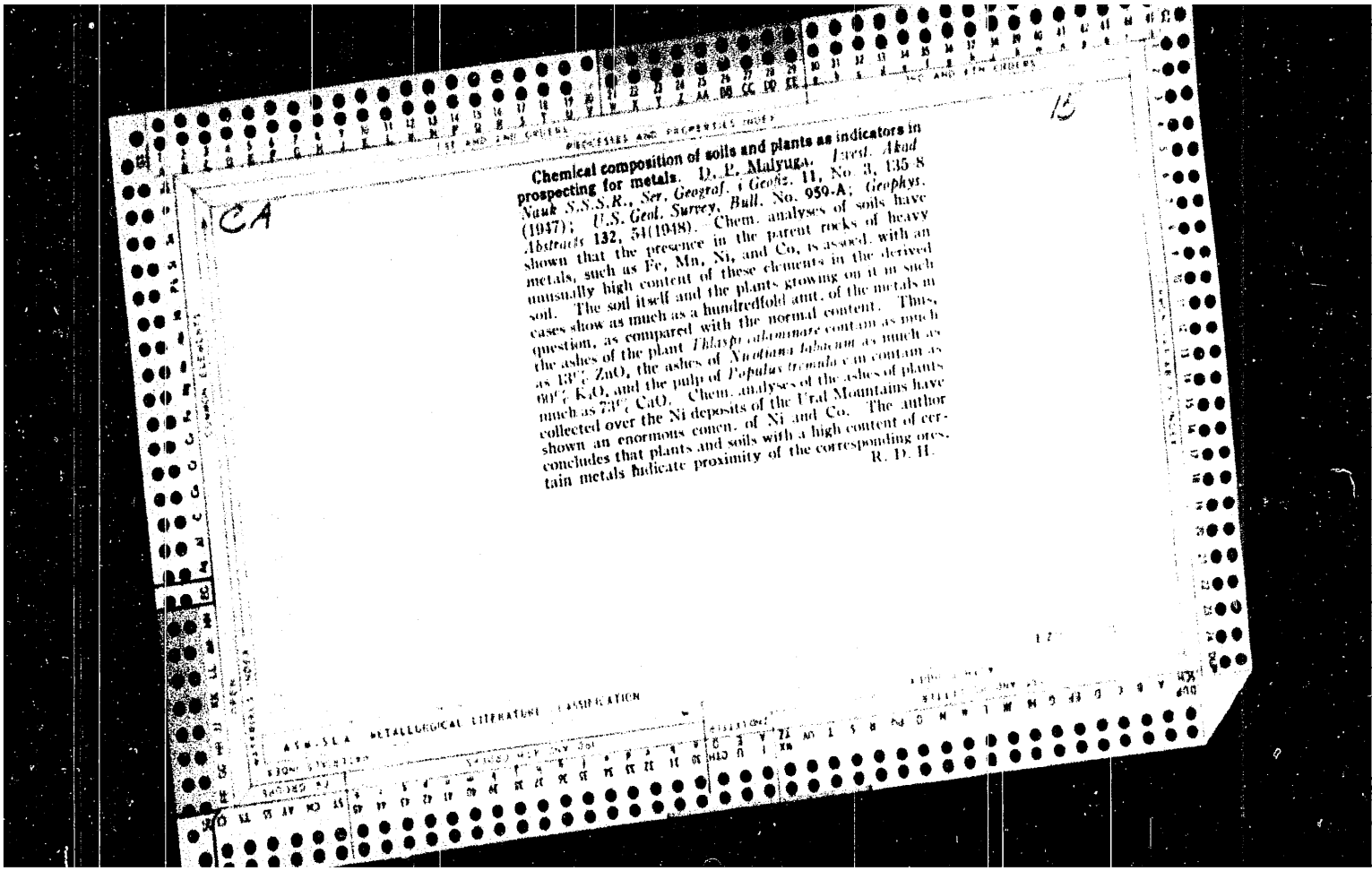

Chemical composition of soils and plants as indicators in prospecting for metals. D. P. Malyuga. *Izvest. Akad Nauk S.S.S.R., Ser. Geograf. i Geofiz.* **11**, No. 3, 135-8 (1947); *U.S. Geol. Survey, Bull.* No. 950-A; *Geophys. Abstracts* **132**, 54(1948). Chem. analyses of soils have shown that the presence in the parent rocks of heavy metals, such as Fe, Mn, Ni, and Co, is associd. with an unusually high content of these elements in the derived soil. The soil itself and the plants growing on it in such cases show as much as a hundredfold amt. of the metals in question, as compared with the normal content. Thus, the ashes of the plant *Thlaspi calaminare* contain as much as 13% ZnO, the ashes of *Nicotiana labacum* as much as 60% K_2O, and the pulp of *Populus tremula* can contain as much as 73% CaO. Chem. analyses of the ashes of plants collected over the Ni deposits of the Ural Mountains have shown an enormous concn. of Ni and Co. The author concludes that plants and soils with a high content of certain metals indicate proximity of the corresponding ores.

R. D. H.

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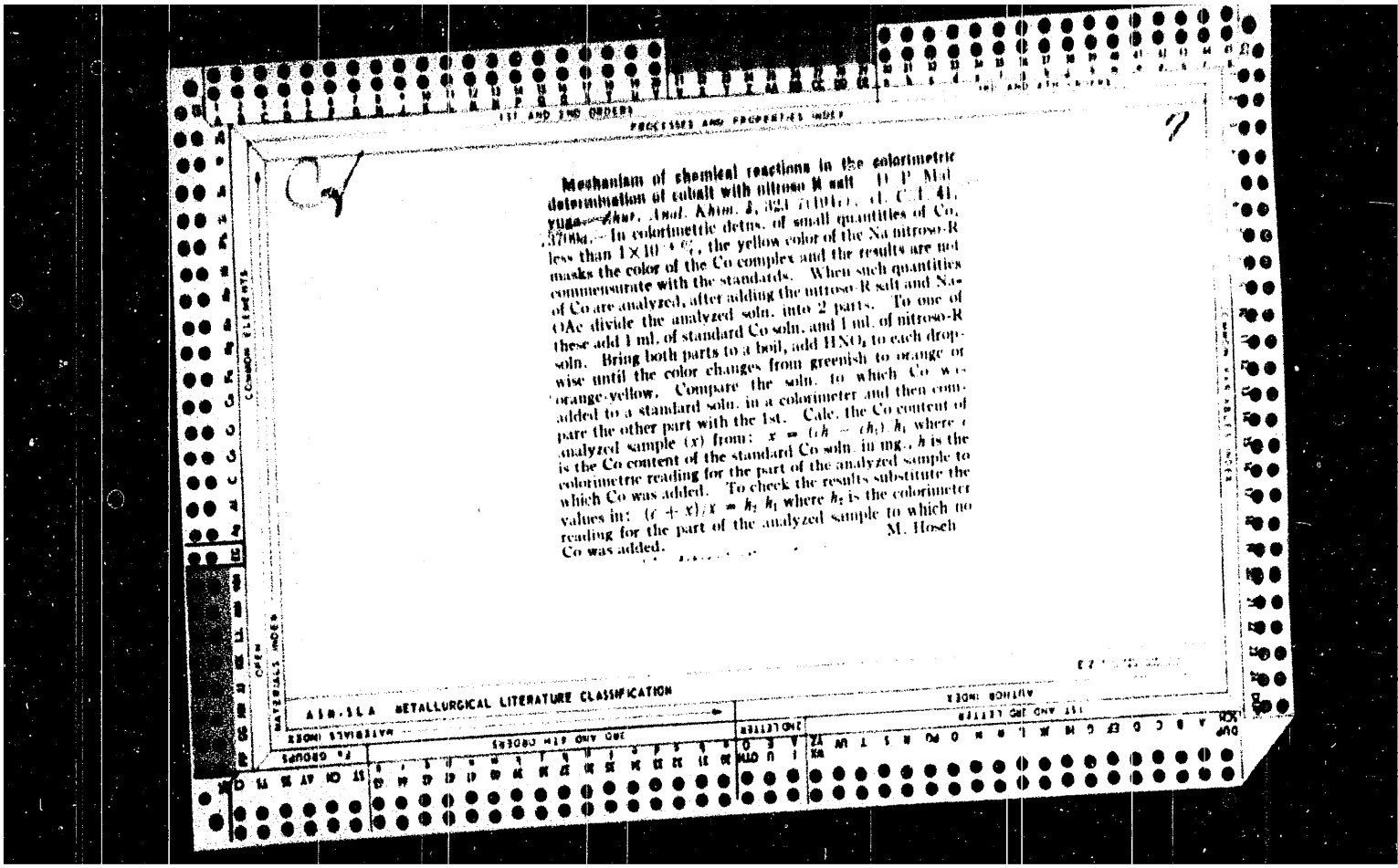

Mechanism of chemical reactions in the colorimetric determination of cobalt with nitroso R salt [O. P. Mal'yugina—Zhur. Anal. Khim. 2, 32-4 (1947)]. cf. C. A. 41, 5710d.—In colorimettic detns. of small quantities of Co, less than 1×10^{-4} %, the yellow color of the Na nitroso-R masks the color of the Co complex and the results are not commensurate with the standards. When such quantities of Co are analyzed, after adding the nitroso-R salt and NaOAc divide the analyzed soln. into 2 parts. To one of these add 1 ml. of standard Co soln. and 1 ml. of nitroso-R soln. Bring both parts to a boil, add HNO_3 to each dropwise until the color changes from greenish to orange or orange-yellow. Compare the soln. to which Co was added to a standard soln. in a colorimeter and then compare the other part with the 1st. Calc. the Co content of analyzed sample (x) from: $x = (ch - (h_1)h_1$ where c is the Co content of the standard Co soln. in mg., h is the colorimetric reading for the part of the analyzed sample to which Co was added. To check the results substitute the values in: $(c + x)/x = h_2/h_1$ where h_2 is the colorimeter reading for the part of the analyzed sample to which no Co was added.

M. Hosch

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MALYUGA, D P

PA 3T39

USSR/Geochemistry
Nickel
Cobalt

Aug 1946

"The Geochemistry of the Distribution of Nickel and Cobalt in the Biosphere," by D P Malyuga, 63 pp

"Trudy Biogeokhimicheskoy Lab" No 8

Chemical properties of nickel and cobalt and methods of determining them. Investigation of the migration of nickel, cobalt, and copper in soils. Migration of nickel, cobalt, and copper in natural surface waters. Distribution of nickel and cobalt in organisms, turfs, coals, etc.

3T39

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MALYUGA, D. P.

Vernadsky Lab. of Geochem. Problems, Acad. Sci., (-1946-)

"Colorimetric Determination of Cobalt in Metals, Alloys, and Salts,"

Zhur. Analit. Khim., No. 3, 1946.

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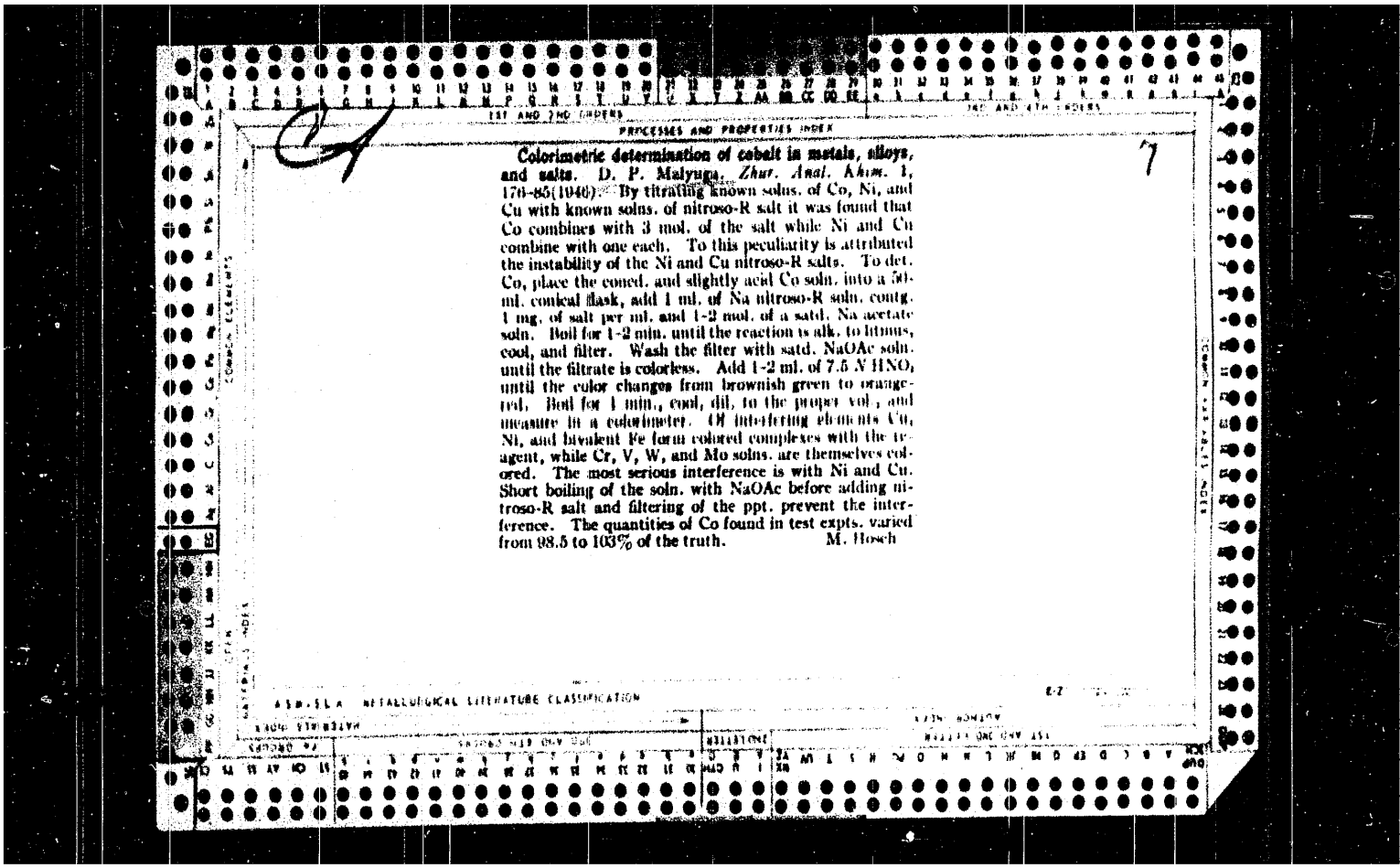

PROCESSES AND PROPERTIES INDEX

Colorimetric determination of cobalt in metals, alloys, and salts. D. P. Malyuga. *Zhur. Anal. Khim.* 1, 176–85(1946). By titrating known solns. of Co, Ni, and Cu with known solns. of nitroso-R salt it was found that Co combines with 3 mol. of the salt while Ni and Cu combine with one each. To this peculiarity is attributed the instability of the Ni and Cu nitroso-R salts. To det. Co, place the concd. and slightly acid Co soln. into a 50-ml. conical flask, add 1 ml. of Na nitroso-R soln. contg. 1 mg. of salt per ml. and 1–2 mol. of a satd. Na acetate soln. Boil for 1–2 min. until the reaction is alk. to litmus, cool, and filter. Wash the filter with satd. NaOAc soln. until the filtrate is colorless. Add 1–2 ml. of 7.5 *N* HNO_3 until the color changes from brownish green to orange-red. Boil for 1 min., cool, dil. to the proper vol., and measure in a colorimeter. Of interfering elements Co, Ni, and bivalent Fe form colored complexes with the reagent, while Cr, V, W, and Mo solns. are themselves colored. The most serious interference is with Ni and Cu. Short boiling of the soln. with NaOAc before adding nitroso-R salt and filtering of the ppt. prevent the interference. The quantities of Co found in test expts. varied from 98.5 to 103% of the truth. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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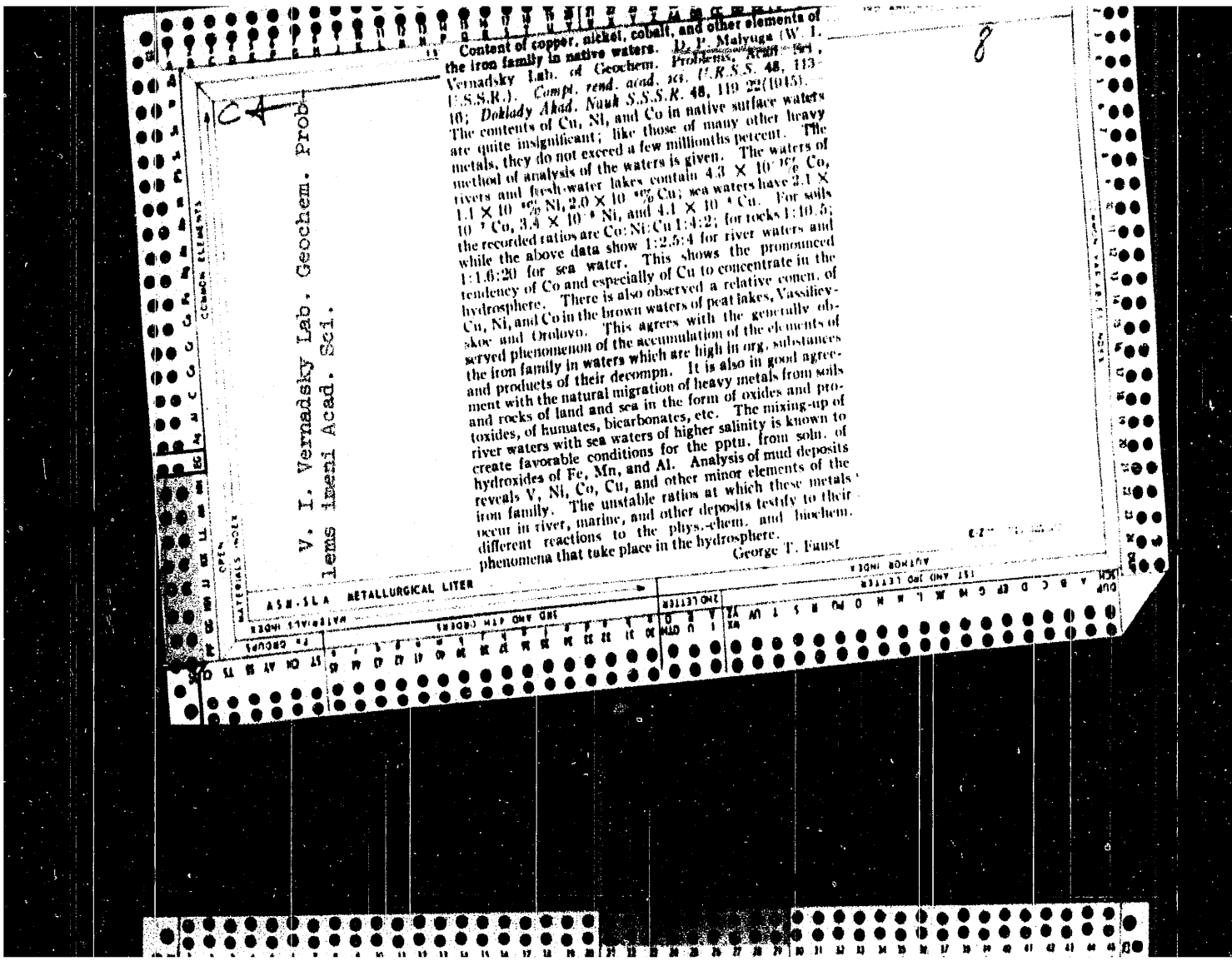
V. I. Vernadsky Lab. Geochem. Prob
lems Inent Acad. Sci.
C4
8
Content of copper, nickel, cobalt, and other elements of the iron family in native waters. D. P. Malyuga (V. I. Vernadsky Lab. of Geochem. Problems, Acad. Sci., U.S.S.R.). Compt. rend. acad. sci. U.R.S.S. 48, 113-16; Doklady Akad. Nauk S.S.S.R. 48, 119-22(1945). The contents of Cu, Ni, and Co in native surface waters are quite insignificant; like those of many other heavy metals, they do not exceed a few millionths percent. The method of analysis of the waters is given. The waters of rivers and fresh-water lakes contain 4.3 × 10⁻⁶% Co, 1.1 × 10⁻⁵% Ni, 2.0 × 10⁻⁵% Cu; sea waters have 2.1 × 10⁻⁷ Co, 3.4 × 10⁻⁶ Ni, and 4.1 × 10⁻⁶ Cu. For soils the recorded ratios are Co:Ni:Cu 1:4:2; for rocks 1:10.5; while the above data show 1:2.5:4 for river waters and 1:1.6:20 for sea water. This shows the pronounced tendency of Co and especially of Cu to concentrate in the hydrosphere. There is also observed a relative concn. of Cu, Ni, and Co in the brown waters of peat lakes, Vassilievskoe and Orolovo. This agrees with the generally observed phenomenon of the accumulation of the elements of the iron family in waters which are high in org. substances and products of their decompn. It is also in good agreement with the natural migration of heavy metals from soils and rocks of land and sea in the form of oxides and protoxides, of humates, bicarbonates, etc. The mixing-up of river waters with sea waters of higher salinity is known to create favorable conditions for the pptn. from soln. of hydroxides of Fe, Mn, and Al. Analysis of mud deposits reveals V, Ni, Co, Cu, and other minor elements of the iron family. The unstable ratios at which these metals occur in river, marine, and other deposits testify to their different reactions to the phys.-chem. and biochem. phenomena that take place in the hydrosphere.
George T. Faust
METALLURGICAL LITER

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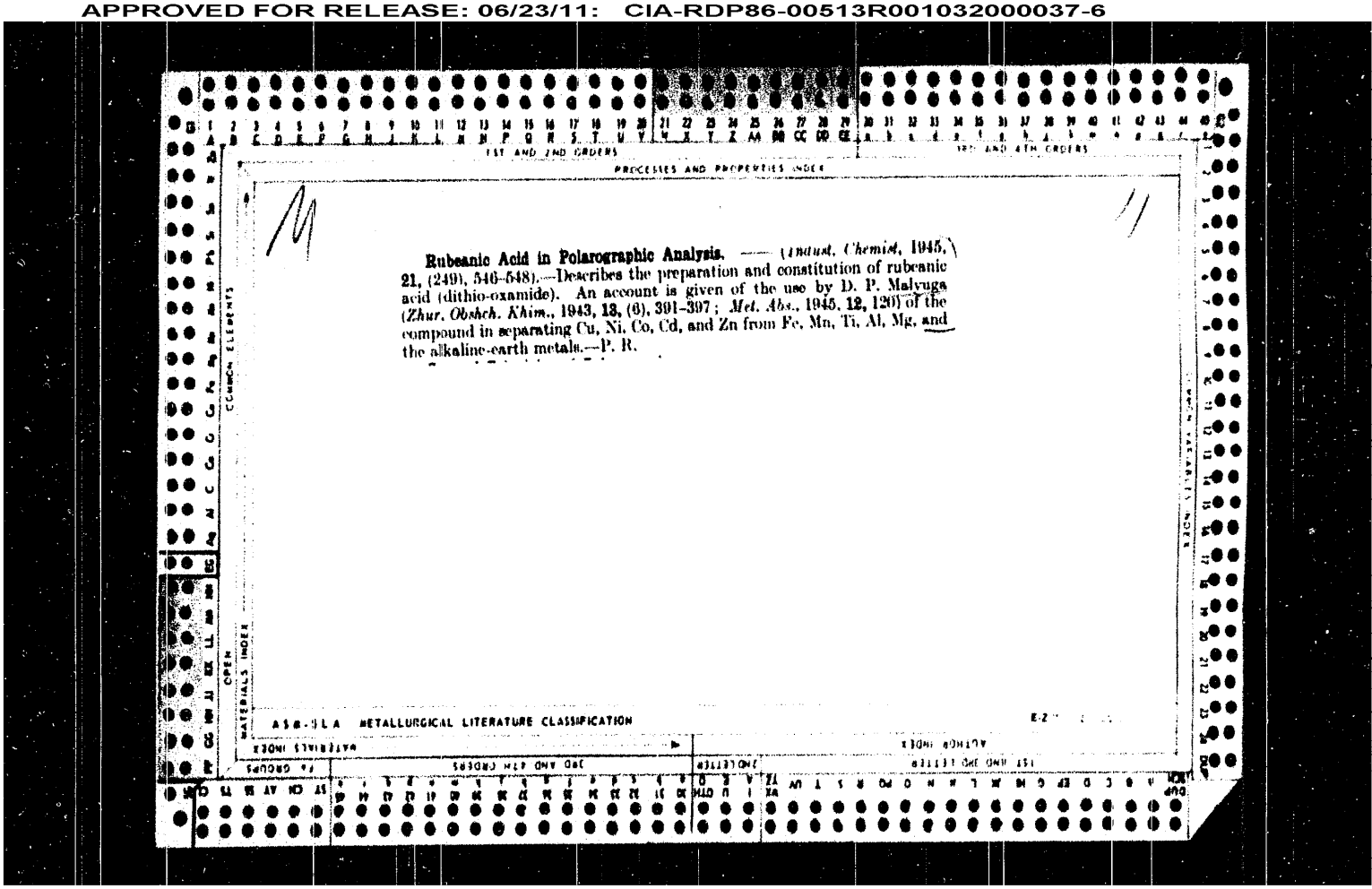

PROCESSES AND PROPERTIES INDEX

Rubeanic Acid in Polarographic Analysis. — (*Analyst, Chemist*, 1945, 21, (249), 546–548).—Describes the preparation and constitution of rubeanic acid (dithio-oxamide). An account is given of the use by D. P. Malyuga (*Zhur. Obshch. Khim.*, 1943, **13**, (6), 391–397; *Met. Abs.*, 1945, **12**, 120) of the compound in separating Cu, Ni, Co, Cd, and Zn from Fe, Mn, Ti, Al, Mg, and the alkaline-earth metals.—P. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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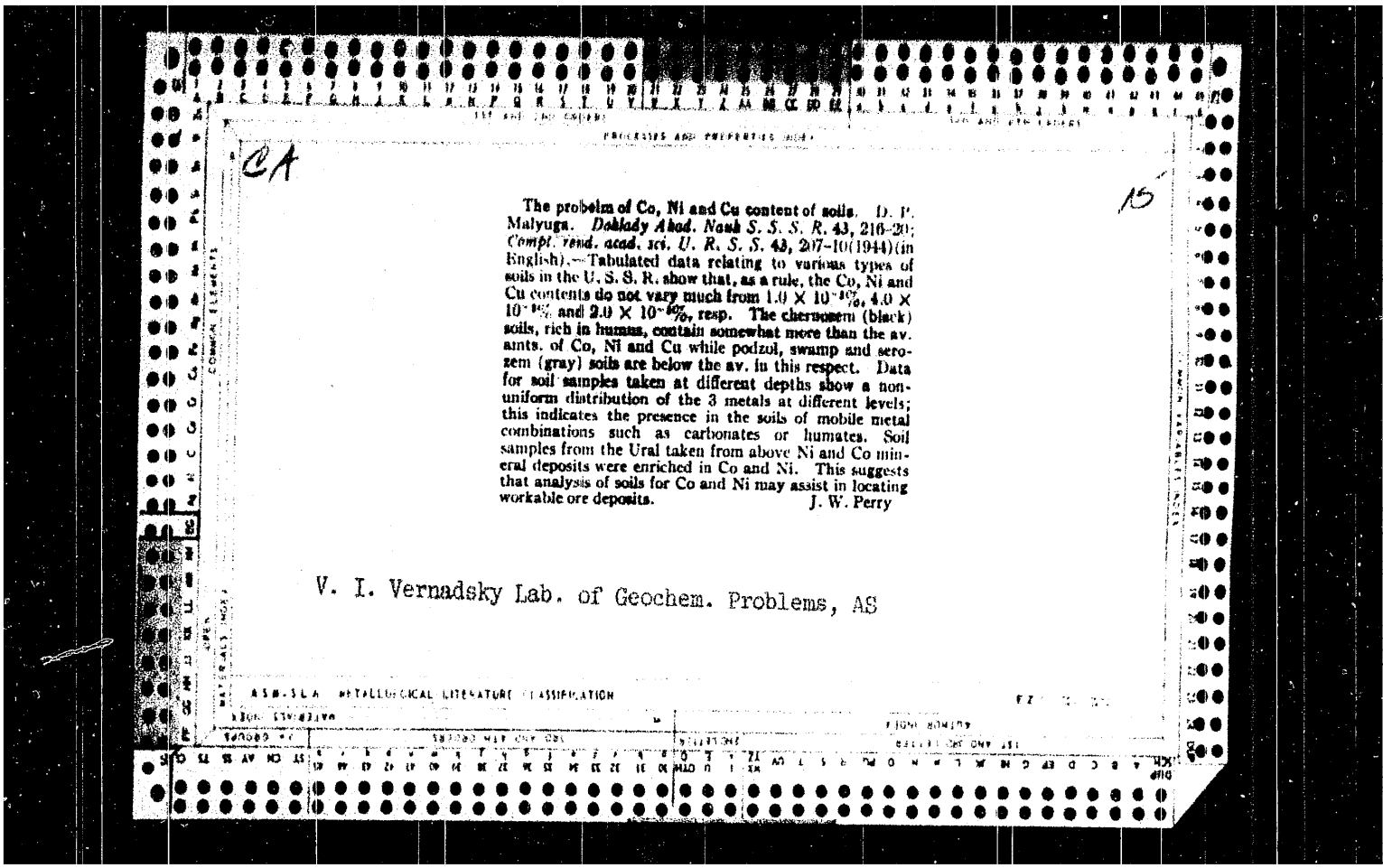

CA

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The problem of Co, Ni and Cu content of soils. D. P. Malyuga. *Doklady Akad. Nauk S. S. S. R.* 43, 216–20; *Compt. rend. acad. sci. U. R. S. S.* 43, 207–10(1944)(in English).—Tabulated data relating to various types of soils in the U. S. S. R. show that, as a rule, the Co, Ni and Cu contents do not vary much from 1.0×10^{-4}%, 4.0×10^{-4}% and 2.0×10^{-4}%, resp. The chernozem (black) soils, rich in humus, contain somewhat more than the av. amts. of Co, Ni and Cu while podzol, swamp and serozem (gray) soils are below the av. in this respect. Data for soil samples taken at different depths show a nonuniform distribution of the 3 metals at different levels; this indicates the presence in the soils of mobile metal combinations such as carbonates or humates. Soil samples from the Ural taken from above Ni and Co mineral deposits were enriched in Co and Ni. This suggests that analysis of soils for Co and Ni may assist in locating workable ore deposits. J. W. Perry

V. I. Vernadsky Lab. of Geochem. Problems, AS

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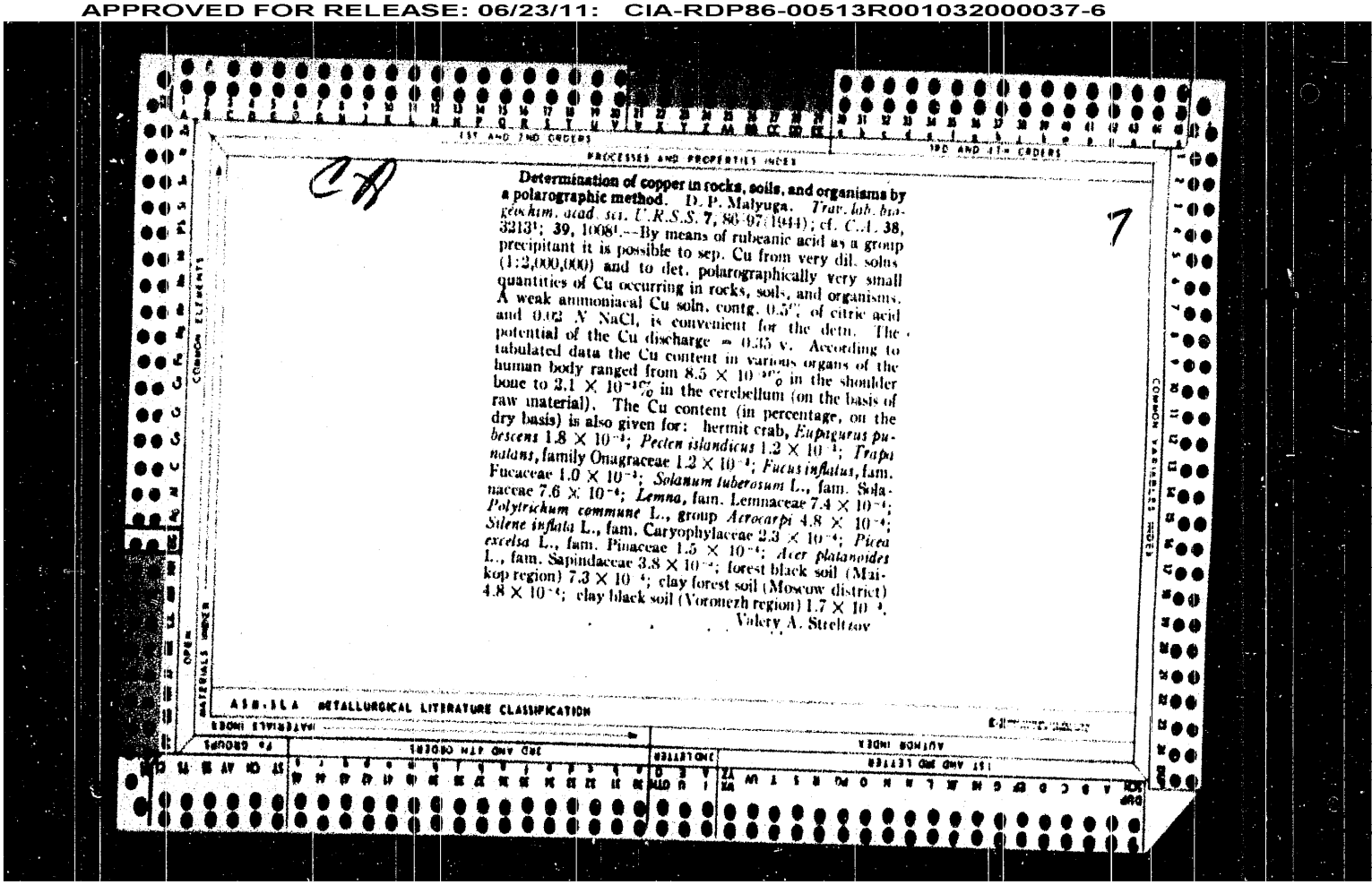

Determination of copper in rocks, soils, and organisms by a polarographic method. D. P. Malyuga. *Trav. lab. biogéochim. acad. sci. U.R.S.S.* **7**, 86–97 (1944); cf. *C.A.* **38**, 3213[1]; **39**, 1008[1].—By means of rubeanic acid as a group precipitant it is possible to sep. Cu from very dil. solns (1:2,000,000) and to det. polarographically very small quantities of Cu occurring in rocks, soils, and organisms. A weak ammoniacal Cu soln. contg. 0.5% of citric acid and 0.02 *N* NaCl, is convenient for the detn. The potential of the Cu discharge = 0.35 v. According to tabulated data the Cu content in various organs of the human body ranged from 8.5×10^{-3}% in the shoulder bone to 2.1×10^{-1}% in the cerebellum (on the basis of raw material). The Cu content (in percentage, on the dry basis) is also given for: hermit crab, *Eupagurus pubescens* 1.8×10^{-4}; *Pecten islandicus* 1.2×10^{-4}; *Trapa natans*, family Onagraceae 1.2×10^{-4}; *Fucus inflatus*, fam. Fucaceae 1.0×10^{-3}; *Solanum tuberosum* L., fam. Solanaceae 7.6×10^{-4}; *Lemna*, fam. Lemnaceae 7.4×10^{-4}; *Polytrichum commune* L., group *Acrocarpi* 4.8×10^{-4}; *Silene inflata* L., fam. Caryophylaceae 2.3×10^{-4}; *Picea excelsa* L., fam. Pinaceae 1.5×10^{-4}; *Acer platanoides* L., fam. Sapindaceae 3.8×10^{-4}; forest black soil (Maikop region) 7.3×10^{-4}; clay forest soil (Moscow district) 4.8×10^{-4}; clay black soil (Voronezh region) 1.7×10^{-4}.

Valery A. Streltzov

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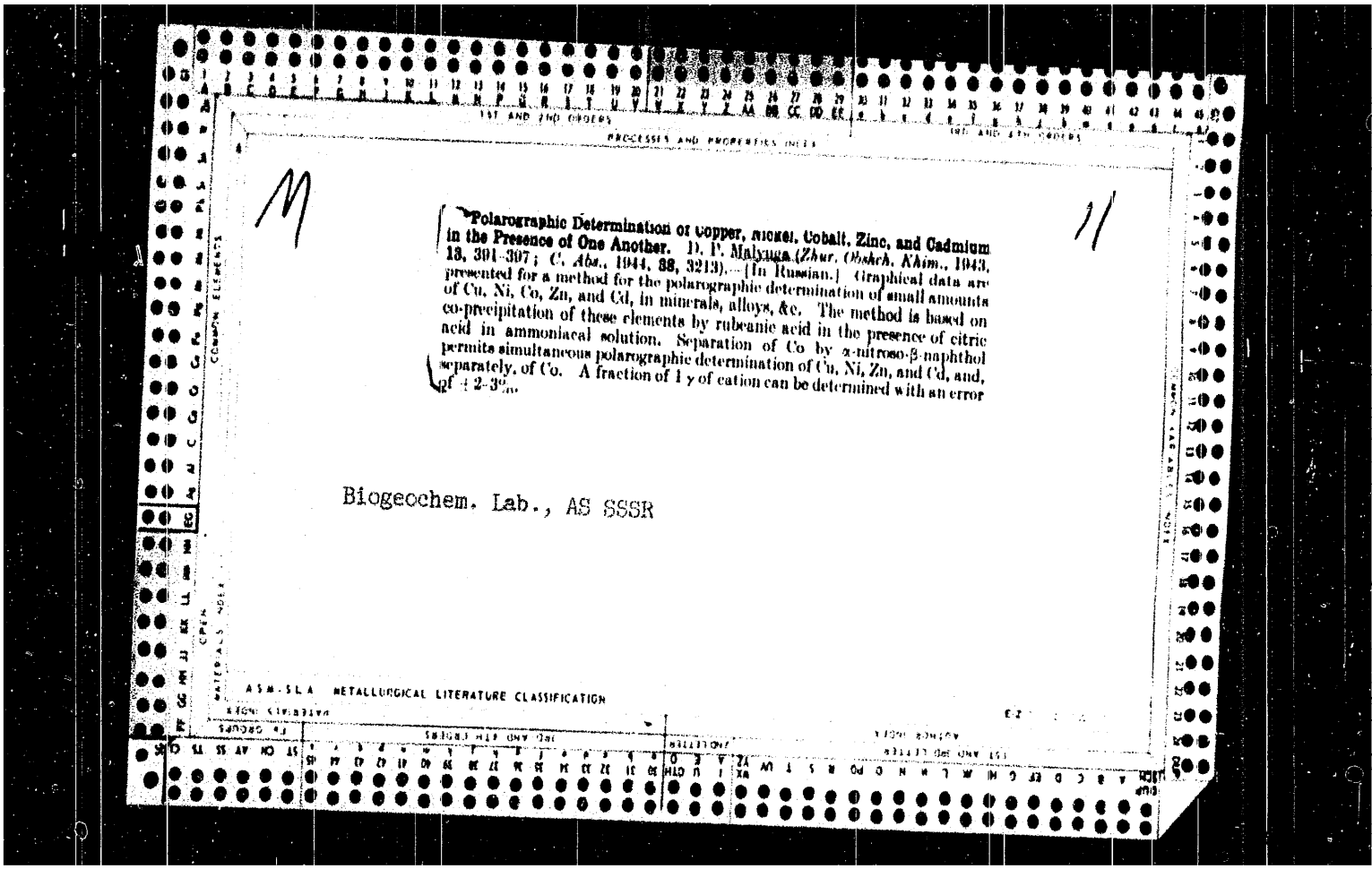

Polarographic Determination of Copper, Nickel, Cobalt, Zinc, and Cadmium in the Presence of One Another. D. P. Malyuga (*Zhur. Obshch. Khim.*, 1943, 13, 301–307; *C. Abs.*, 1944, 38, 3213).—[In Russian.] Graphical data are presented for a method for the polarographic determination of small amounts of Cu, Ni, Co, Zn, and Cd, in minerals, alloys, &c. The method is based on co-precipitation of these elements by rubeanic acid in the presence of citric acid in ammoniacal solution. Separation of Co by α-nitroso-β-naphthol permits simultaneous polarographic determination of Cu, Ni, Zn, and Cd, and, separately, of Co. A fraction of 1 γ of cation can be determined with an error of ± 2–3%.

Biogeochem. Lab., AS SSSR

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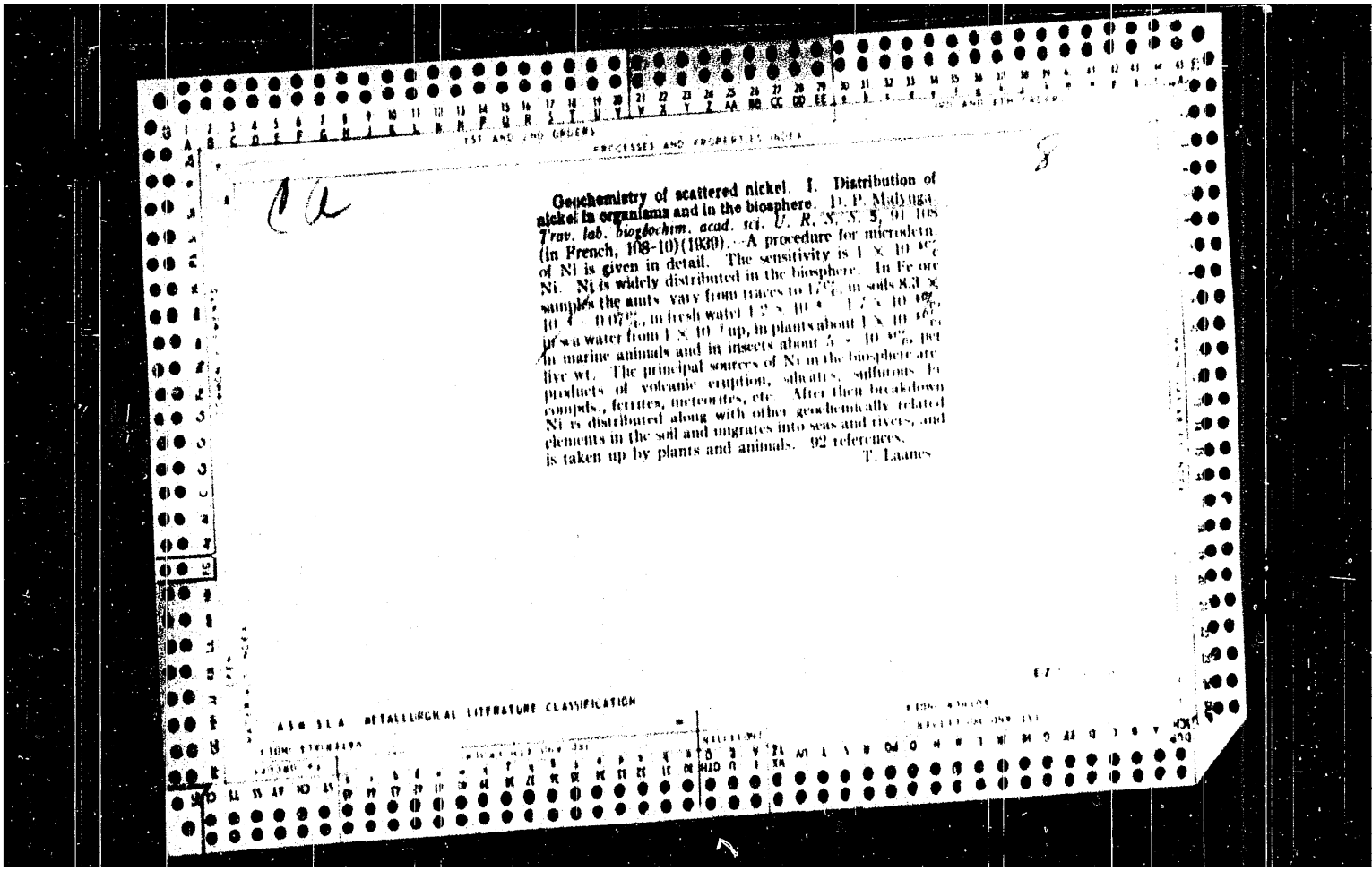

Geochemistry of scattered nickel. I. Distribution of nickel in organisms and in the biosphere. D. P. Malyuga. *Trav. lab. biogéochim. acad. sci. U. R. S. S.* 5, 91-108 (in French, 108-10)(1939).—A procedure for microdetn. of Ni is given in detail. The sensitivity is 1×10^{-6}% Ni. Ni is widely distributed in the biosphere. In Fe ore samples the amts vary from traces to 1%, in soils 8.3 × 10^{-4} – 0.07%, in fresh water 1.2×10^{-6} – 1.7×10^{-4}%, in sea water from 1×10^{-6} up, in plants about 1×10^{-4}%, in marine animals and in insects about 5×10^{-4}% per live wt. The principal sources of Ni in the biosphere are products of volcanic eruption, silicates, sulfurous Fe compds., ferrites, meteorites, etc. After their breakdown Ni is distributed along with other geochemically related elements in the soil and migrates into seas and rivers, and is taken up by plants and animals. 92 references.

T. Laanes

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CHICHMAREV, Georgiy Petrovich; MALYUGA, Anton Filippovich; RAGAZINA, M.F., inzh., ved. red.; SOROKINA, T.M., tekhn. red.

[Contact jaw for the soldering of copper. Semiautomatic confeyer for the soldering of glass insulators]Kontaktnaia mashina dlia paiki medi. Konveier-poluavtomat dlia paiki stekliannykh izoliatorov. [By]A.F.Maliuga. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 11 p. (MIRA 16:2)
(Solders and soldering--Equipment and supplies)
(Electric insulators--Welding)

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MALYUCHKOV, Ye.N., kandidat tekhnicheskikh nauk.

Productive capacity of multi-cut lathes using hard-alloy cutting tools. Stan.i instr. 18 no.9:6-12 S '47. (MLRA 9:1)
(Lathes) (Cutting tools)

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MALYUCHKOV, YEL.N., Docent

First State Bearings Plant, "Conference on Finishing Hard-Alloy Cutters," Stanki i Instrument, 10, No 1, 1939.

Report U-1505, 4 Oct 1951.

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L 2503-66
ACCESSION NR: AP5014606

absorption line shape, although complete splitting is not reached until -190C. The different trifluoride exhibited different temperature behavior in the line shape and line width. Since all compounds had similar chemical properties and nearly equal lattice parameters, the difference between them can be attributed only to differences in their magnetic properties. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Institut stali i splavov, Moscow (Institute of Steel and Alloys)

SUBMITTED: 22Jan64 ENCL: 00 SUB CODE: IC, NP

NO REF SOV: 003 OTHER: 001

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L 2503-66 EWA(k)/EWT(l)/EWT(m)/EPF(c)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c)
RDW/JD/JW/JG/LHB/

ACCESSION NR: AP5014606 UR/0181/65/007/006/1892/1894

AUTHOR: Baturina, E. A.; Luk'yanychev, Yu. A.; Malyuchkov, O. T.

TITLE: Investigation of trifluorides of rare earth elements of the cerium group by the nuclear magnetic resonance method

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1892-1894

TOPIC TAGS: cerium, lanthanum, praseodymium, neodymium, nuclear magnetic resonance, line width, fluorine compound

ABSTRACT: The nuclear magnetic resonance of F^{19} in LaF_3, PrF_3, and NdF_3 was investigated with a spectrometer using a permanent magnet of intensity 5035 Oe and a Pound type generator. The permanent magnetic field was modulated at a frequency 73 cps with a depth not exceeding 0.1 of the line width. The resonance was observed in the temperature interval from 22 to -150C. Comparison of the calculated values of the second moments with the experimental ones shows that the symmetrical nuclear magnetic resonance signal of diamagnetic LaF_3 is satisfactorily described by dipole-dipole interaction. In the case of the other trifluorides, the experimental second moments exceeded the calculated values. This discrepancy is attributed to the contribution of paramagnetism. A decrease in the temperature distorts the F^{19}

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L 13563-66

ACC NR: AP6001235

heating the compound changes from a metastable to a stable state; this transition is associated with a change in the position of the fluorine atoms. Orig. art. has: 5 figures and 2 tables.

SUB CODE: 07, 11 / SUBM DATE: 23May65 / ORIG REF: 004 / OTH REF: 009

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 13563-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/JW

ACC NR: AP6001235 SOURCE CODE: UR/0363/65/001/012/2182/2188

AUTHOR: Luk'yanychev, Yu. A.; Baturina, E.A.; Malyuchkov, O.T.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Study of the composition and structure of lanthanum and cerium trifluoride crystal hydrates

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2182-2188

TOPIC TAGS: lanthanum compound, cerium compound, CRYSTAL STRUCTURE ANALYSIS, CRYSTAL LATTICE, METAL CRYSTAL

ABSTRACT: Lanthanum and cerium trifluoride crystal hydrates were precipitated from hydrochloric and nitric acid solutions by adding 40% hydrofluoric acid. Chemical analysis showed the composition of the crystal hydrates to be $LaF_3 \cdot (0.8-0.5)H_2O$ and $CeF_3 \cdot (0.5-0.3H_2O)$. NMR, x-ray phase analysis, and IR methods showed that the hydrates have a lattice similar to the anhydrous salts. The water molecules entering into the composition of the crystal hydrate are located in the vacancies of the lattice and form hydrogen bonds of the type F... H-O of different configurations. The presence of water molecules in the lattice appreciably affects the mobility of fluorine atoms. X-ray phase analysis, NMR, thermographic and thermogravimetric methods established that the removal of water molecules occurs gradually in $LaF_3 \cdot 0.5H_2O$, at 60 — 80 and 80 — 225C; in $CeF_3 \cdot 0.5H_2O$, at 60 — 80, 80 — 360, and 380 — 450C. The structure of phases dehydrated below 225C remains unchanged, and on further

Card 1/2 UDC: 546.654'161+546.655'161

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L 14083-65
ACCESSION NR: AP5002154

Investigations are now being conducted into hydrides of binary alloys whose second component does not form hydrides. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 14Oct63 ENCL: 00 SUB CODE: MM

NO REF SOV: 002 OTHER: 000 JPRS

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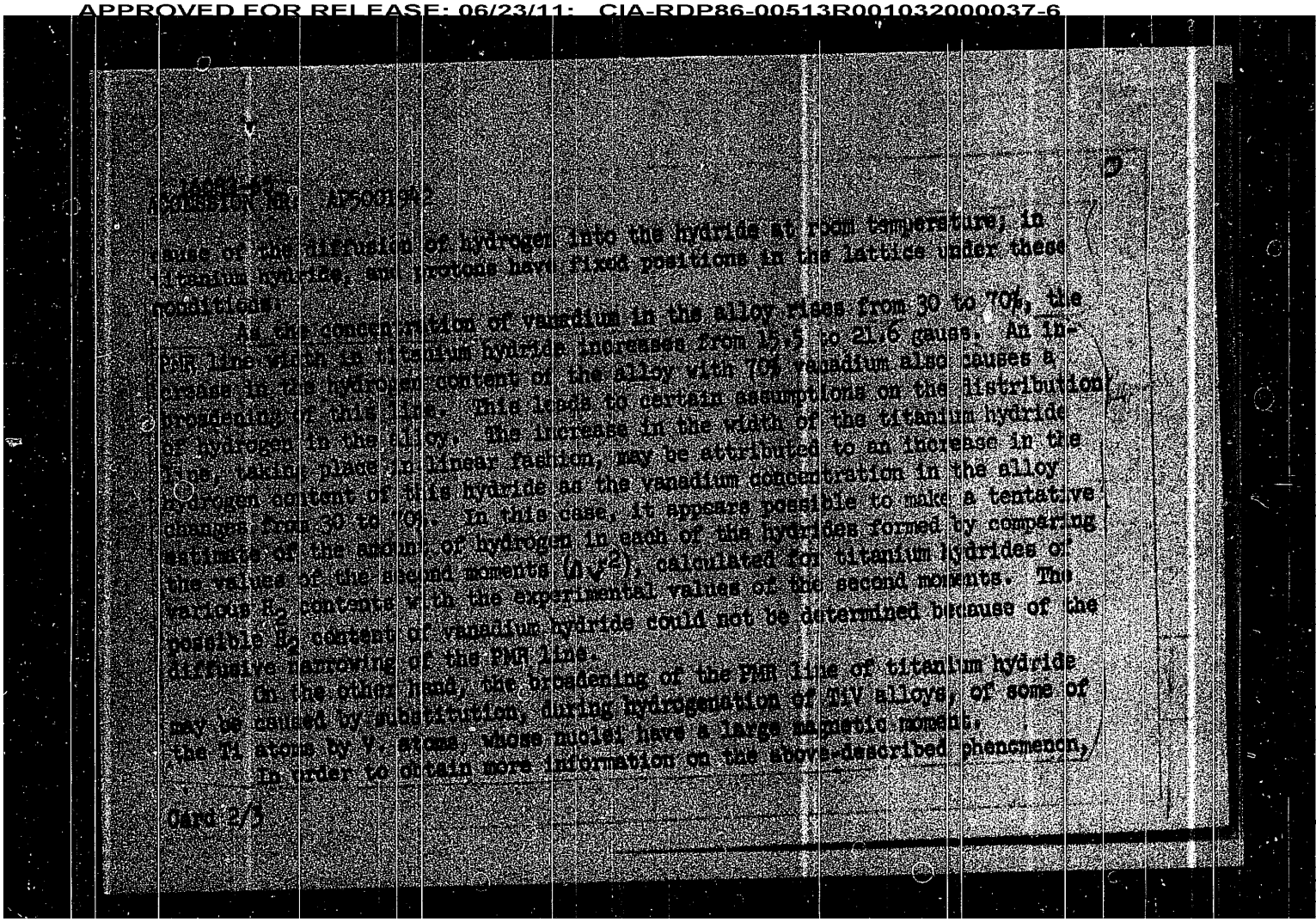
APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6



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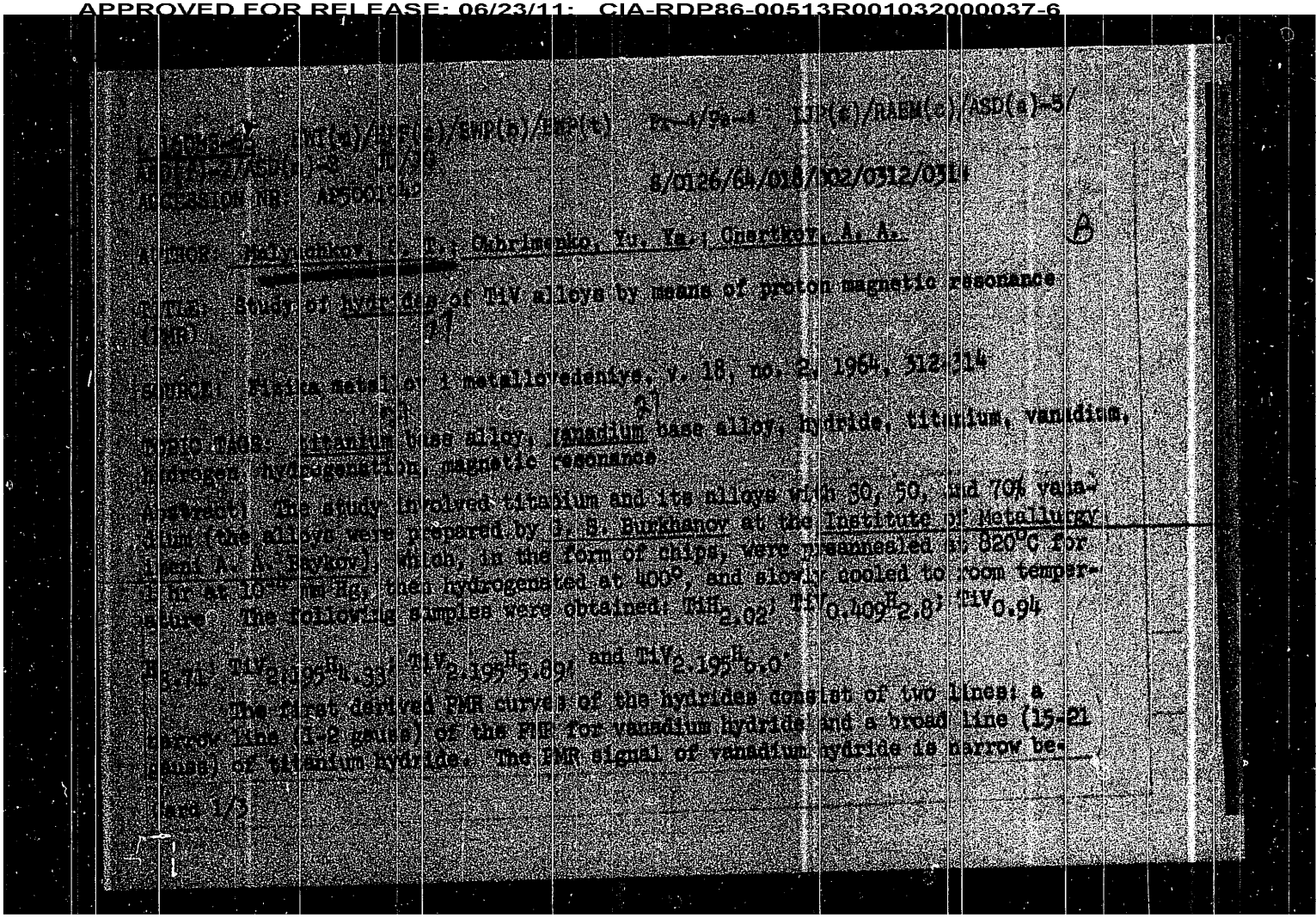

ACCESSION NR: AP5001542 S/0126/64/018/002/0312/0314

AUTHOR: Polyanskov, I. B.; Ovchinnikov, Yu. Ye.; Chertkov, A. A.

TITLE: Study of hydrides of TiV alloys by means of proton magnetic resonance (PMR)

SOURCE: Fiz. metal. i metallovedeniye, v. 18, no. 2, 1964, 312-314

TOPIC TAGS: titanium base alloy, vanadium base alloy, hydride, titanium, vanadium, hydrogen, hydrogenation, magnetic resonance

ABSTRACT: The study involved titanium and its alloys with 30, 50, and 70% vanadium (the alloys were prepared by I. S. Burkhanov at the Institute of Metallurgy and A. A. Baykov), which, in the form of chips, were annealed at 820°C for 3 hr at 10^{-4} mm Hg, then hydrogenated at 400°, and slowly cooled to room temperature. The following samples were obtained: $TiH_{2.02}$, $TiV_{0.409}H_{2.8}$, $TiV_{0.94}H_{2.75}$, $TiV_{2.195}H_{4.35}$, $TiV_{2.195}H_{5.89}$, and $TiV_{2.195}H_{6.0}$.

The first derived PMR curves of the hydrides consist of two lines: a narrow line (1-2 gauss) of the PMR for vanadium hydride and a broad line (15-21 gauss) of titanium hydride. The PMR signal of vanadium hydride is narrow be-

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using the coils shown in Fig. 2. After a demagnetizing field of 215 oe had been applied and removed again, no residual magnetization of the permanent magnet could be detected. To produce ±215 oe in the gap it was sufficient to feed the coils with 0.15 a, resulting in a field of ±139 oe; the additional field strength is produced by changed inductance of the armco iron pole pieces. Even greater field shifts (± 500 oe) may be achieved by cooling the coils. There are 3 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

Fig. 1. Schematic drawing of the magnetic fluxes.

Fig. 2. Diagram of the magnetization assembly. Legend: (1) coils (radius r = 32 mm, wire 0.3 mm thick, 5400 turns), (2) pole pieces, (3) sample, (4) electronics.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

S/032/62/028/012/007/023
B104/B186

AUTHORS: Malyuchkov, O. T., Pavlovskaya, V. S., and Ostrovskiy, G. A.

TITLE: A method of reversibly varying the field of a permanent magnet of an n.m.r.-spectrometer

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 12, 1962, 1457-1458

TEXT: In studying broad n.m.r. lines it is necessary to vary the intensity H of the main field when the mode of operation of the generator is given. A method of varying the field strength of a permanent magnet is proposed which covers a wider range than has hitherto been possible. This is done by means of magnetic coils inserted in the gap (Fig. 1). The magnetic flux is much changed by the coils: only a part of the magnetic flux (Φ_A) of the coils producing a demagnetizing field, whilst the other part (Φ_E) branches off. Using small coils Φ_A can be kept low. Tests were made with a magnetization assembly for ± 215 oe designed earlier (O. T. Malyuchkov, V. S. Pavlovskaya, Nauchnyye doklady Vysshey shkoly, no. 3, 231 (1958)),

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Nuclear magnetic resonance ...

b = 50 ± 10 kcs. First Boron sample comprises 50 to 60% v/v amorphous phase, while second and third contained the α- and β-rhombohedral modifications. The degree of amorphousness was determined from the background intensities of X-ray diffraction photographs at low scattering angles. All three Boron samples gave low intensity NMR spectra with the absorption spectrum consisting of a narrow central line with wide, gradually falling-off wings, the width of the latter differing in each sample. There is 1 figure.

ASSOCIATION: Moskovskiy institut stali
(Moscow Steel Institute)

SUBMITTED: August 5, 1961 (initially)
December 12, 1961 (after revision)

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39766
S/126/62/013/006/015/018
E202/E492

AUTHORS: Malyuchkov, O.T., Povitskiy, V.A.

TITLE: Nuclear magnetic resonance study of CrB, LaB_6 and crystalline boron

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.6, 1962, 933-934

TEXT: NMR signal from B^{11} was observed in CrB, LaB_6 and three allotropes of B; all samples were 99% pure, the compounds being in powder form $< 72\mu$, and B in pressed cylinders of 11 mm diameter and 22 mm height. The radiospectrometer used was described by O.T.Malyuchkov and V.S.Pavlovskaya (NDVSh, Metallurgiya, no.3, 1958, 231). In CrB, the quadrupole bond constant $b = 72 \pm 7$ kcs, but when one or two p-levels of B were filled $b = 4700$ kcs, and when all three 2p-levels were evenly filled $b = 0$. In the b.c.c. LaB_6, each La atom must transfer two electrons to the B_6 octahedron while the B - B bond is highly anisotropic consequently giving more distorted line than CrB. Frequency shifts were determined viz. parallel 6.7×10^{-4} and perpendicular 16×10^{-4} from the resonance frequency and

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Nuclear magnetic resonance ...

gives higher phonon dissipation and lower electron mobility. These relations were further exemplified on a plot of relative melting points of diborides. It was concluded that in common with monocarbides and mononitrides, the diborides undergo characteristic filling of the d-shell of the transitional metal with the valency electrons of the metalloid atoms. There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali
(Moscow Steel Institute)

SUBMITTED: July 15, 1961

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Nuclear magnetic resonance ...

hence only a very approximate value was given. Experimental values of the authors are compared below with those calculated by C. Townes and B.Daily (J. Chem. Phys., v.17, no.3, 1949, 782).

	TiB_2	ZrB_2	NbB_2	TaB_2	CrB_2	Mo_2B_5
B_{exp} kcs	127 ± 13	84 ± 8	30 ± 3	114 ± 11	900 ± 300	$300 \pm {}^{300}_{100}$
B_{calc} kcs	175	58	46	68	542	473

The authors studied also the change in the physical properties when a boride is formed from the respective metal and when one metal replaces another in the boride molecule. The former reaction was attributed to the filling of the incomplete d-shell. This formation is responsible for a negative Hall constant, lowering the probability of the s-d transitions and making the s-electrons participate in the conductivity. With the gradual filling of the d-shell the modulus of the Hall coefficient also decreases and the interatomic bond boron-metal weakens, which

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S/126/62/013/005/006/031
E202/E492

AUTHORS: Malyuchkov, O.T., Povitskiy, V.A.

TITLE: Nuclear magnetic resonance studies of transitional metal borides

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.5, 1962, 676-680

TEXT: Diborides of Ti, Zr, Nb, Ta and Cr, and also Mo_2B_5 were studied. The NMR signal from B^{11} was observed at 6866 kcs in a magnetic field of 5030 oersted, using an RF spectrometer previously described. The field nonuniformity within the 2 cm^3 sample did not exceed 0.1 oersted. Samples were 99% pure and approaching stoichiometric composition. In all the compounds X-ray phase analysis showed the presence of single phase. The quadrupole bond constant B_1 was measured from the distance of the two satellite lines and the (strong) central line. Except for CrB_2 and Mo_2B_5, the satellites were observed directly; in the case of CrB_2, the secondary effects of the strong quadrupole interaction made the value of B very inaccurate. The satellite of Mo_2B_5 was not found in the range $0 < B < 200$ kcs,

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S/226/62/000/004/004/012
I/003/I203

Investigation of the borides...

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: January 15, 1962

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

S/226/62/000/004/004/012
I003/I203

AUTHORS: Malyuchkov, O.T. and Povitskiy, V.A.

TITLE: Investigation of the borides of transition metals and of pure boron by nuclear magnetic resonance

PERIODICAL: Poroshkovaya metallurgiya, no.4, 1962, 26-34

TEXT: In order to investigate the nature of the chemical bonds of the above compounds, isomorphic diborides of Ti, Zr, Nb, Ta, Cr, Mo_2B_5, CrB, LaB_6, and three different samples of pure boron were investigated by an X-ray spectrometer. The investigations were carried out in a magnetic field with an intensity of 5030 oersted and a frequency of 6860 kc. A formula is given for the calculation of the gradient of the electric field at the site of the nucleus:

$$q=\sum|\psi|^2\{(3\cos^2\vartheta_i-1)r_i^{-3}\}d\tau \qquad (3)$$

Elements with complete subshells (Sn, Pb, Hg, Cd, Au, As etc.) do not form borides. In diborides as in monocarbides and mononitrides, the d-shell of the transition metal is complete. There are 5 figures.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYUCHKOV, O.T.; STARK, Yu.S.; FINKEL'SHTEYN, B.N.

Nuclear magnetic resonance in iron and cobalt. Izv.vys.ucheb.zav.; chern.met. 4 no.9:114-115 '61. (MIRA 14:10)

1. Moskovskiy institut stali.
(Nuclear magnetic resonance) (Iron--Magnetic properties)
(Cobalt--Magnetic properties)

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S/181/61/003/011/046/056
The effect of silver impurities on ... B104/B138

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina (Moscow Steel Institute imeni I. V. Stalin)

SUBMITTED: May 22, 1961 (initially), July 11, 1961 (after revision)

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The effect of silver impurities on ...

4.25 Å, which approximates to the commonly accepted value of 4.26 Å. There is no change in the x-ray diffraction lines of cuprous oxide in the concentrations investigated, but the large-angle doublet, which is quite distinct in pure cuprous oxide becomes blurred with increasing silver content. A silver atom replaces a copper one, disturbing the cuprous oxide lattice. At 24°C the resonance frequency of Cu^{63} nuclei in pure cuprous oxide is 25.99 Mc/sec. There was no shift in the resonance frequency with varying Ag concentration. The second moment of the absorption line of pure cuprous oxide is 15.6 kc/sec. The half-width of the absorption line is 9 kc/sec. With increased Ag concentration the resonance line widens, and the intensity decreases as $I = I_o \exp(-NC)$, vanishing completely at about 0.7 mole%. It is concluded from this exponential law that one silver atom "extinguishes" 400 neighboring Cu atoms. Thanks are given to E. I. Fedin and G. K. Semin (INEOS AN SSSR) for help in designing and setting up the spectrometer. There are 2 figures and 1 non-Soviet reference.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

S/181/61/003/011/046/056
B104/B138

AUTHORS: Malyuchkov, O. T., Finkel'shteyn, B. N., and Ch'ih I-Jang

TITLE: The effect of silver impurities on the nuclear quadrupole resonance of Cu^{63} in cuprous oxide

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3534-3535

TEXT: The study deals with the effect of silver on the shape of Cu^{63} nuclear quadrupole resonance(NQR) lines in cuprous oxide. Measurement was made by a quadrupole spectrometer designed at the Kafedra fiziki Moskovskogo instituta stali (Department of Physics of the Moscow Institute of Steel). Passage of the nuclear quadrupole resonance was effected by rotating a variable capacitor in a Vang-type oscillator - detector circuit. Rate of passage was 500 cps/min. The oscillator frequency was modulated by a vibrating capacitor and the parasitic amplitudes were suppressed by a T-filter. Specimens of 99.99% pure copper and 99.9% pure silver were prepared by oxidation in air at 950 - 1000°C. The silver content varied from 0.05 to 1%. The lattice constant of cuprous oxide was found to be

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30797
S/181/61/003/011/043/056
Nuclear magnetic resonance in iron ... B104/B138

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina
(Moscow Steel Institute imeni I. V. Stalin)

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Nuclear magnetic resonance in iron ...

frequency was 214.1 Mc/sec. The first derivative of the resonance line corresponds to the dispersion signal and has parameters similar to those first discovered by Gossard and Portis. Nmr of Fe^{57} in unenriched iron powder produced by the reducing scale was discovered by an autodyne Hopkins circuit with amplitude stabilization, and frequency modulation (modulation depth up to 1 Mc/sec) by crystal diodes. The signals were calibrated on a Pound-and-Watkins-instrument. The nmr lines were recorded with the same kind of block as used in an РСКФ - ЯМС-1 (RSKF-MIS-1) radio spectrometer. 1 g of iron powder, dispersed in polystyrene, was placed in the coil of an oscillating circuit. In this case also the main part of the nmr signal is due to dispersion of susceptibility. The amplification factor of the radio-frequency field was 8000. Resonance was observed at 43.7 Mc/sec (internal-field of 318 kilooersteds). This differs from data obtained by Sandle et al., and by C. Robert and J. M. Winter (C. R., 250, 3831, Paris, 1960) for iron of higher purity, due to the presence of oxygen. [Abstracter's note: Complete translation.] There are 4 references: 1 Soviet and 3 non-Soviet.

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30727
S/181/61/003/011/043/056
B104/B138

24,7900 (1055, 1144, 1163)

AUTHORS: Malyuchkov, O. T., Stark, Yu. S., and Finkel'shteyn, B. N.

TITLE: Nuclear magnetic resonance in iron and cobalt

PERIODICAL: Fizika tverdogo tela, v. 3, no. 11, 1961, 3528-3529

TEXT: A. C. Gossard and A. M. Portis (J. Appl. Phys., 31, no. 5, 205, 1960) were the first to discover nuclear magnetic resonance (nmr) in a ferromagnetic material. In metallic cobalt powder with a cubic face-centered lattice they obtained an nmr signal in the absence of an external magnetic field. The resonance frequency, 213.1 Mc/sec, corresponds to an internal-field strength of 213.4 kilooersteds. Also, together with W. J. Sandle (Physics and Chemistry of Solids, 17, no. 3/4, 341, 1961) they discovered nmr in iron enriched with Fe^{57} up to 76.7 %. To produce nmr in cobalt, a 200-1000-Mc/sec coaxial generator was used with frequency modulation (modulation depth up to 0.5 Mc/sec) by crystal diodes. The specimen was 50 g of metallic cobalt powder (purity 99.9%, particle size $\leq 20\mu$) dispersed after quenching in polystyrene. At 294°K resonance

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the presence of oxygen in the specimens. The circuit was sufficiently sensitive to enable observation of signals of nuclear magnetic resonance from the iron body of a condenser of variable capacitance. There are 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The English-language references read as follows: Ref. 3: Quoted in text; Ref. 4: A.C.Gossard, A.M.Portis, W.J.Saundle Phys.Chem.Solids, 1961, 17, No.3/4, 341; Ref. 6: Quoted in text; Ref. 7: C. Robert, J.M.Winter, C.R. Paris, 1960, 250, 3831.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: June 15, 1961

[Abstractor's Note: Abridged translation.]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

Nuclear magnetic resonance

signal, the parameters of which were analogous to those observed by Portis and Gossard (Ref 3). A circuit with an oscillatory detector according to Hopkins was used for observing the line of nuclear magnetic resonance of Fe^{57}. In the experiments described non-enriched natural iron in the form of a powder of 99.6% purity produced by scale reduction was used. The dimensions of the particles did not exceed 20 μ. Into the inductance coil of the oscillator circuit 1 g of iron powder was inserted which was dispersed in polystyrene. The recording of the line of nuclear magnetic resonance has shown that even in this case the main component of the signal is due to dispersion. According to the observations of the authors, the coefficient of amplification of the radio frequency field reaches the value of 8000. The resonance frequency equalled 43.7 Mc/s, which corresponds to a potential of the internal field of 3.18×10^5 Oe. The width of the derivative of the line of nuclear magnetic resonance at half amplitude as 1.9 Mc/s. The decrease in potential of the internal field and increase in the width as compared to data obtained for iron of a higher degree of purity can be explained by

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Nuclear magnetic resonance

purpose of observing nuclear magnetic resonance [illegible] the Otdel radiospektroskopii Problemnaya laboratoriya [illegible] metallov MIS (Radiospectroscopy division Laboratory on [illegible] Metal Physics MIS) built a test-rig consisting of a [illegible] of radio-frequency signals an amplifier and a recording [illegible] Two differing circuits were used for the frequency range 300 to 1000 Mc/s a coaxial oscillator with frequency modulation using crystal diodes and a depth of modulation of 0.5 Mc/s for the frequency range 6 to 70 Mc/s an autodyne oscillator-detector having a circuit according to Hopkins with amplitude stabilization and frequency modulation by means of crystal diodes to a depth of 1 Mc/s For calibrating the nuclear magnetic resonance signals a calibrator of the type described by Pound and Watkins (Ref 6 Progress in nuclear physics 1952 2 21) was used. For cobalt (99.9% purity) the first circuit was used applying a charge of 50 g of metallic powder of a grain size not exceeding 20 [illegible] which was atomized after being quenched in polystyrene [illegible] the resonance frequency equalled 215.1 Mc/s The resonance line derivative of the resonance line was of a shape of a dispersion

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24,7900 (1055, 1144, 1163)

AUTHORS: Malyuchkov, O.T., Stark, Yu.S. and Finkel'shteyn, R.A.

TITLE: Nuclear magnetic resonance in iron and cobalt

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 9, 1961, 114-115

TEXT: A. M. Portis and A. C. Gossard (Ref. 3: J. Appl. Phys. 1960, 31, No.5, 205S) detected a very intensive signal of nuclear magnetic resonance in powder of cobalt with a face-centred cubic lattice at a frequency of 213.1 Mc/s in absence of an external magnetic field. This showed that nuclei of the atoms of metallic cobalt are located in a very intensive internal field with a potential equalling 213400 Oe. Later these authors and their team detected nuclear magnetic resonance in iron which was enriched with Fe^{57} up to 76.7%. In natural iron the concentration of this isotope, the atomic nucleus of which has a magnetic moment differing from zero, is only 2.245%. The theory of temperature dependence of the frequency of nuclear magnetic resonance, taking into consideration the influence of electron conductivity was expounded by Yu. M. Seidov (Ref. 5: Izv. AN SSSR, 1961, 2). For the

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teraction of the magnetic moments of the protons with the conduction electrons is possible. A covalent bond exists in zirconium hydride, a metallic bond in $TiH_{1.98}$. Finally, the authors thank Professor Ya. S. Umanskiy for valuable advice. There are 1 figure and 10 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina (Moscow Steel Institute imeni I. V. Stalin)

PRESENTED: March 27, 1959, by G. V. Kurdyumov, Academician

SUBMITTED: March 27, 1959

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α-phase and face-centered cubic β-phase. Hydrides with an H-content of > 55% were again monophase with a face-centered cubic lattice. The line width at an H-content of 20-35% changed with the hydrogen content, below and above it was constant (0.6 and 14 Oe, accordingly). From the change in the line width, it was concluded that the H-atoms of these hydrides rotate, just as in palladium- and tantalum hydrides. The asymmetric lines at a low H-content indicate a metallic bond. The form of the lines passes from the α-hydrides (Lorentz) to the β-hydrides (Gauss). For determining the position of the H-atoms in $TiH_{1.98}$, ZrH_2-hydrides, the second and fourth moments of the lines were measured, and the theoretical moments in the introduction of molecular hydrogen into the octahedral and tetrahedral lattices were calculated. The theoretical value of the tetrahedral lattice agreed with the experimental data on ZrH_2 (Table 1), yet not so for $TiH_{1.98}$. This circumstance points to the difference of the hydrogen bond in the two compounds. In $TiH_{1.98}$, an in-

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21 (5), 5 (4)
AUTHORS: Malyuchkov, O. T., Finkel'shteyn, B. N. SOV/20-127-4-26/60

TITLE: Magnetic Proton Resonance in Titanium- and Zirconium Hydrides

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 4, pp 822 - 824 (USSR)

ABSTRACT: Investigations of the magnetic proton resonance in Ti- and Zr-hydrides were carried out at a frequency of 21449 kilocycles in a magnetic field (5035 Oerstedt). A radio-frequency spectrometer with a permanent magnet was used for measurements. V. S. Pavlovskaya took part in the development of this spectrometer. The signals of the magnetic proton resonance were recorded on the film of an electron potentiometer. The titanium- and zirconium hydride samples had the following hydrogen content: $TiH_{1.98}$, $TiH_{1.75}$, $TiH_{1.05}$, $TiH_{0.95}$, $TiH_{0.65}$, $TiH_{0.50}$, $TiH_{0.20}$, ZrH_2. The phase composition of the hydrides was determined by X-ray structure analysis. The data obtained agreed with data available in publications (Ref 3). Hydrides with an H-content of $< 20\%$ were monophase and had a hexagonal lattice; at an H-content of 20-55%, they had two phases: hexagonal

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MALYUCHKOV, O. T. Cand Tech Sci -- (diss) "Study of hybrids of titanium, zirconium, and niobium by the method of nuclear magnetic resonance." Mos, 1959. 15 pp (Min of Higher and Secondary Specialized Education RSFSR. Mos Order of Labor Red Banner Inst of Steel im I. V. Stalin), 120 copies (KL, 48-59, 115)

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A Permanent Magnet for the Radiospectroscopic Investigation of Nuclear Magnetic Resonance in Metals and Alloys

SOV/163-58-3-38/49

was produced under the supervision of B.N.Finkelstein. The alloy ANKO A (GOST 4402 - 48) was used as source material for this permanent magnet. The magnet consists of 18 disks with a diameter of 230 mm; it is 50 mm high. Figure 2 shows the position of the disks as related to one another with respect to the frame consisting of Armco iron. The magnetic disks cast of this material have high magnetic properties, namely: B_r=13100 Gauss, H_c= 575 Oersted, B_d= 11000 Gauss, H_d= 450 Oersted; $(BH)_{max}$= 4.9 x 10^6 Gauss-Oersted. With all this properties the cast disks meet the requirements for the production of permanent magnets. There are 4 figures and 8 references, 3 of which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: December 23, 1957

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

AUTHORS: Malyuchkov, O. T., Pavlovskaya, V. S. SOV/163-58-3-38/49

TITLE: A Permanent Magnet for the Radiospectroscopic Investigation of Nuclear Magnetic Resonance in Metals and Alloys (Postoyannyy magnit k radiospektrometru dlya issledovaniya yadernogo magnitnogo rezonansa v metallakh i splavakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 3, pp 231 - 235 (USSR)

ABSTRACT: To each orientation of the atomic spin corresponds a certain value of the real magnetic moment of the nucleus located in the magnetic field, i.e. to each orientation corresponds an energetic state of the nuclear spin. The nuclear paramagnetic resonance is analogous to the absorption spectrum in the absorption range. The energetic state of the magnetic moment in the nucleus is determined by the radioelectronic equipment used in the radiospectroscopic measurements. To determine the nuclear magnetic resonance in metals and alloys a permanent magnet for the radiospectrometry

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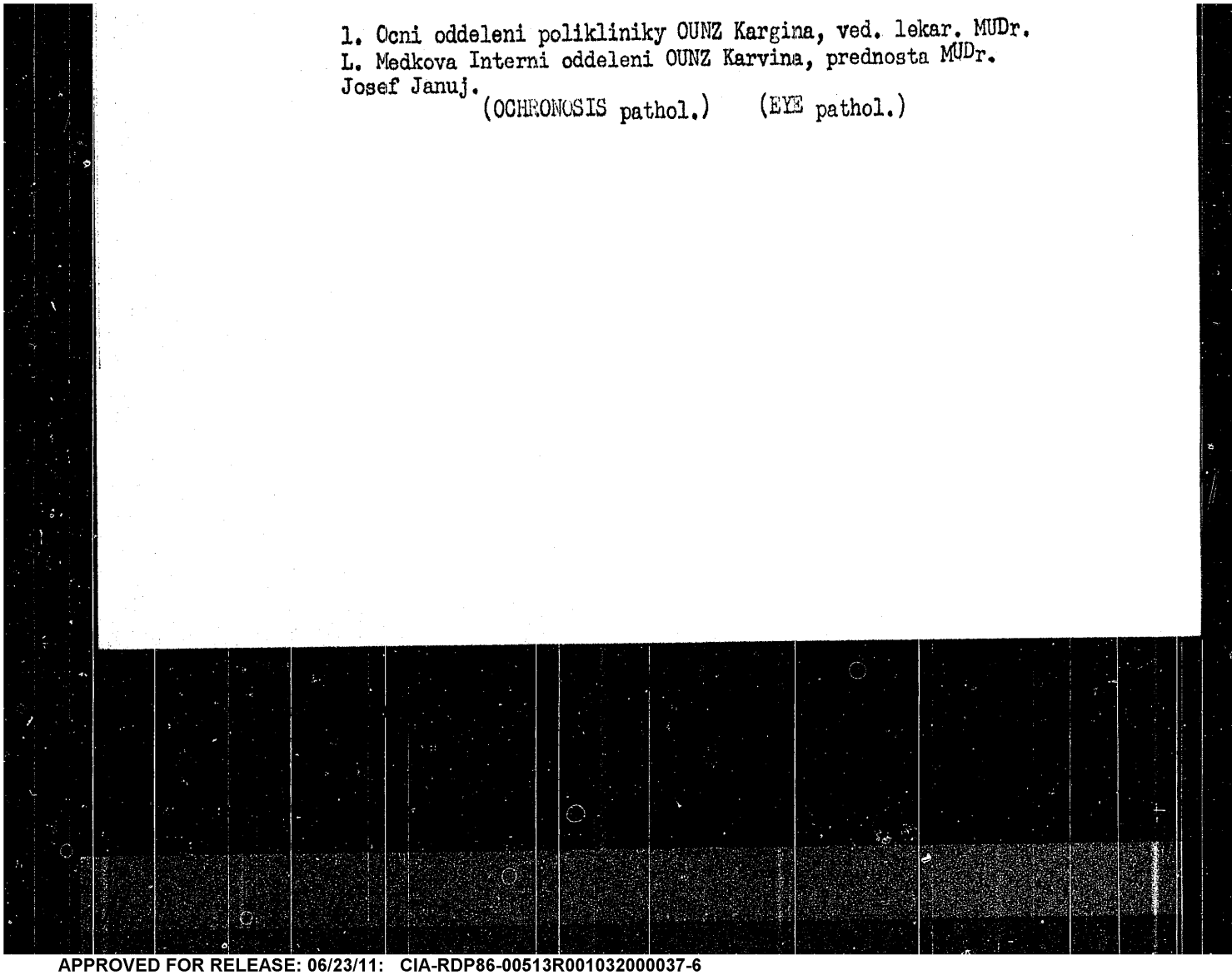

1. Ocni oddeleni polikliniky OUNZ Kargina, ved. lekar. MUDr. L. Medkova Interni oddeleni OUNZ Karvina, prednosta MUDr. Josef Januj.

(OCHRONOSIS pathol.) (EYE pathol.)

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MALYSZKO, Z.

MALYSZKO, Z. Aeronautic championship criticized. p. 13.

Vol. 11, No. 45, Nov. 1955.
SPRZYDLATA POLSKA.
TECHNOLOGY
Warszawa, Poland

So: East European Accession, Vol. 5, No. 5, May 1956

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POLAND

Director: Prof Dr F. PRZESMYCKI, technical aid: A. BACINSKA

"Epidemic Situation of Poliomyelitis in Poland in 1961"

Warsaw, Przegląd Epidemiologiczny, Vol XVI, No 4, 1962, pp369-375.

Abstract: [Author's English summary modified] The profound influence on the epidemiology, etiology and clinical picture of poliomyelitis of the introduction of mass immunization with attenuated polio vaccines in 1959 is discussed. Observations on the influence and effect of immunizations with such vaccines on the epidemic situation of poliomyelitis in Poland are reported. 4 tables, 2 diagrams; 5 Polish references.

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MALYSZKO, H.

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POLAND

KULESZA, Aleksandra; Department of Epidemiology (Zaklad Epidemiologii), PZH (Panstwowy Zaklad Higieny -- State Institute of Hygiene), Director: Prof Dr J. KOSTRZEWSKI, Head of the Institute: Prof Dr F. PRZESMYCKI; with the collaboration of J. GOLEBA, T. JOPKIEWICZ, M. [illegible], H. KOCHELSKA, M. KOENIG, K. LIPINSKA, R. LUTYNSKI, J. [illegible], H. MALYSZKO, M. MEYMAN, A. OLES, S. PIESKA, K. [illegible], T. ROMANIEWICZ, J. ROZWADOWNA, W. SOCZEWICA, S. SZC[illegible], S. ZOMMERZOWA all of the Wojewodztwo Health and [illegible] Stations (Wojewodzkie Stacje Sanitarno-[illegible]); H. DOBROWSKI, A. GECOW, J. GELBER, M. [illegible], H. JASKIERZEBSKA, E. JUZWA, J. KUROCZKIN, Z. RESZKE, R. STANCZYK, J. SYGOWATOWICZOWA, Z. SZCZERSKA, K. SZCZYGIELSKI, S. SZYNDLAR, K. SWIGOWA, J. WAJSZCZUK, R. WARZECHA all of the Departments of Poliomyelitis Patients (Oddzialy dla Chorych na Poliomyelitis) of the Wojewodztwo Health and Epidemiological Stations; J. ADAMSKI (Poznan), H. DOBROWOLSKA (Warsaw), J. BOCHENSKA (Lodz), M. KOENIG (Krakow); H. DOBROWOLSKA of the Department of Virology (Zaklad Wirusologii) of PZH,

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ADONAJLO, Aniela; MALYSZKO, Halina; PIATKOWSKI, Jerzy; DZIKOWSKA, Janina; MAGDZIARZ, Henryka; GILEWSKA, Aniela

Comparative evaluation on human subjects of immunizing properties of anti-whooping cough vaccines of domestic production. II. Post-vaccinal reactions after the application of diphtheria-tetanus-whooping cough vaccines. Przegl.epidem. 15 no.2:157-162 '61.

1. Z Zakladu Epidemiologii PZH Kierownik: prof. dr J. Kostrzewski i ze Stacji San.-Epid. dla m. st. Warszawy Dyrektor: dr E. Nierenska.

(VACCINES) (DIPHTHERIA immunol) (TETANUS immunol)
(WHOOPING COUGH immunol)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

HOFFMANN, Bogdan; MALYSZKO, Edward

Studies on a method for the laboratory diagnosis of trichomoniasis in males. Wiad. parazyt. 8 no.2:179-189 '62.

1. Klinika Dermatologiczna Akademii Medycznej, Bialystok.
(TRICHOMONAS INFECTIONS diag)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

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JAROSZEWICZ, Leokadia; MALYSZKO, Edward

Activity of aminotransferase in various strains of the genus Trichomonas. Med. dosw. microbiol. 17 no.1:47-51 '65.

1. Z Zakladu Chemii Fizjologicznej (Kierownik: doc. dr. S. Niewiarowski) i z Zakladu Higieny Ogolnej Akademii Medycznej w Bialymstoku (Kierownik: doc. dr. B. Hoffmann).

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HOFFMANN, Bogdan; MALYSZKO, Edward

Assimilation of amino acids by trichomonas in a semi-synthetic fluid medium with added blood serum. Med. dosw. mikrobiol. 16 no.3:253-257 '64.

1. Z Zakładu Higieny Ogolnej Akademii Medycznej w Bialymstoku (Kierownik: doc. dr B. Hoffmann).

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HOFFMAN, Bogdan; KILCZEWSKI, Waldemar; MALYSZKO, Edward

Studies on trichomoniasis in males. Polski tygod. lek. 16 no.50: 1936-1939 11 D '61.

1. Z Kliniki Dermatologicznej A.M. w Bialymstoku; kierownik: prof. dr Janusz Lesinski.
(TRICHOMONAS INFECTIONS statist) (GENITALIA MALE dis)

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MALYSZKO, ADOLF

Leszczyna wielkoowocowa. (Wyd. 1.) Warszawa, Panstwowe Wydawn. Rolnicze i Lesne, 1955. 40p. (The hazel tree. 1st ed.)

DA Not in DLC

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 10, October 1957. Uncl

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MALYSZEWICZ, Julianna; LITWONOWICZ, Anna

Modern fabrics with square designs. Przegl wlokien 18 no.12: Suppl: Biul CBW przem lek 5 no.11/12:1-4 D '64.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

LITWINOWICZ, Anna; MALYSZEWICZ, Julianna

Silk fabrics for the summer season. Przegl wlokien 17 no.8:Suppl.: Biul centr biura wzorn przem lekk 4 no.5/6:1-2 Ag '63.

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MALYSZ, Danuta; WALICKA, Teresa

Determination of the color of pulverized drugs. Acta Pol. pharm. 22 no.2:155-161 '65

1. Z Zakladu Chemii Analitycznej Instytutu Lekow w Warszawie (Kierownik: doc. Z. Margasinski).

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69750

Contribution to the Theory of Ternary Quadratic Forms. IV. On the Connection With Riemann's Hypothesis

S/043/60/000/02/02/011

aid. He mentions B.A.Venkov.
There are 9 references: 6 Soviet, 1 German, 1 American and 1 English.

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11.1000

AUTHOR: Malystev, A.V.

TITLE: Contribution to the Theory of Ternary Quadratic Forms. IV. On the Connection With Riemann's Hypothesis

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1960, No. 2, pp. 14-27

TEXT: Hypothesis (H): For sufficiently large m the Dirichlet L-function

$$(1.2) \qquad L(s) = \sum_{n=1}^{\infty} \frac{\chi(n)}{n^s} \quad (\mathrm{Re}\, s > 1), \quad \chi(n) = \left(\frac{-4\Omega^2 \Delta m}{n} \right)$$

has no zeros in the domain $|s-1| < \frac{(\ln \ln m)^2 \ln \ln \ln m}{\sqrt{\ln m}}$.

Theorem: If the hypothesis (H) is valid, then the theorems 1-3 and 5 of the author's paper (Ref.1) remain true if one desists from the assumption of the existence of a prime number q with $\left(\frac{-\Delta m}{q} \right) = 1$.

The proof of this assertion is shown with the example of the theorem 1 of (Ref.1). The author thanks Yu.V.Linnik and A.I.Vinogradov for essential

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Malysova, E.

POL.

The fertilizing value of ammonia and urea. K. Boratyński, J. Małyszowa, and Zb. Tyrwa. *Roczniki Nauk Rol.* 71-B-2, 69. No. 1, 53-80 (1954).—Ammonia was found to be a good source of N for mustard seeds in alluvial sandy clay rich in plant nutrients. Yields of straw and seed were equiv. to those obtained on NH_4NO_3. Time of application (10 days before sowing and 7 days after seedling emergence) had no influence. The effect of NH_3 in parallel sand culture studies was markedly smaller. Yields were 10-30% lower than those obtained on NH_4NO_3. The fertilizing value of NH_3 in sand cultures of oats was equiv. to NH_4NO_3. Time of application was without effect. The utilization of N by oats was very great, and in the case of NH_3 even greater than that with NH_4NO_3. Dividing the total dose of nitrogenous fertilizer in NH_3 soln. into 4 portions: (1) before sowing, (2) during tillering, (3) during initial development of stalks, (4) in the beginning of shooting forth, led to an increase in yield of oats as compared to the effect of the same dose given totally before sowing. Dividing the dose of N resulted in all cases in a distinct decrease of straw yields. The percentage N in the grain of oats proved to be distinctly higher when the total dose of all nitrogenous fertilizers was divided. When the N dosage was divided, its percentage in the straw and roots was distinctly lower in the case of NH_4NO_3 slightly lower in the case of NH_3 soln., and higher in the case of urea. The N of urea and NH_3 was assimilated by young oat plants in greater quantities than that of NH_4NO_3. The assimilation declined in later stages of plant development, and in ripe plants the amts. of N taken by the plants from NH_4NO_3 were greater than those taken from NH_3 and urea.

Ernest G. Jaworski

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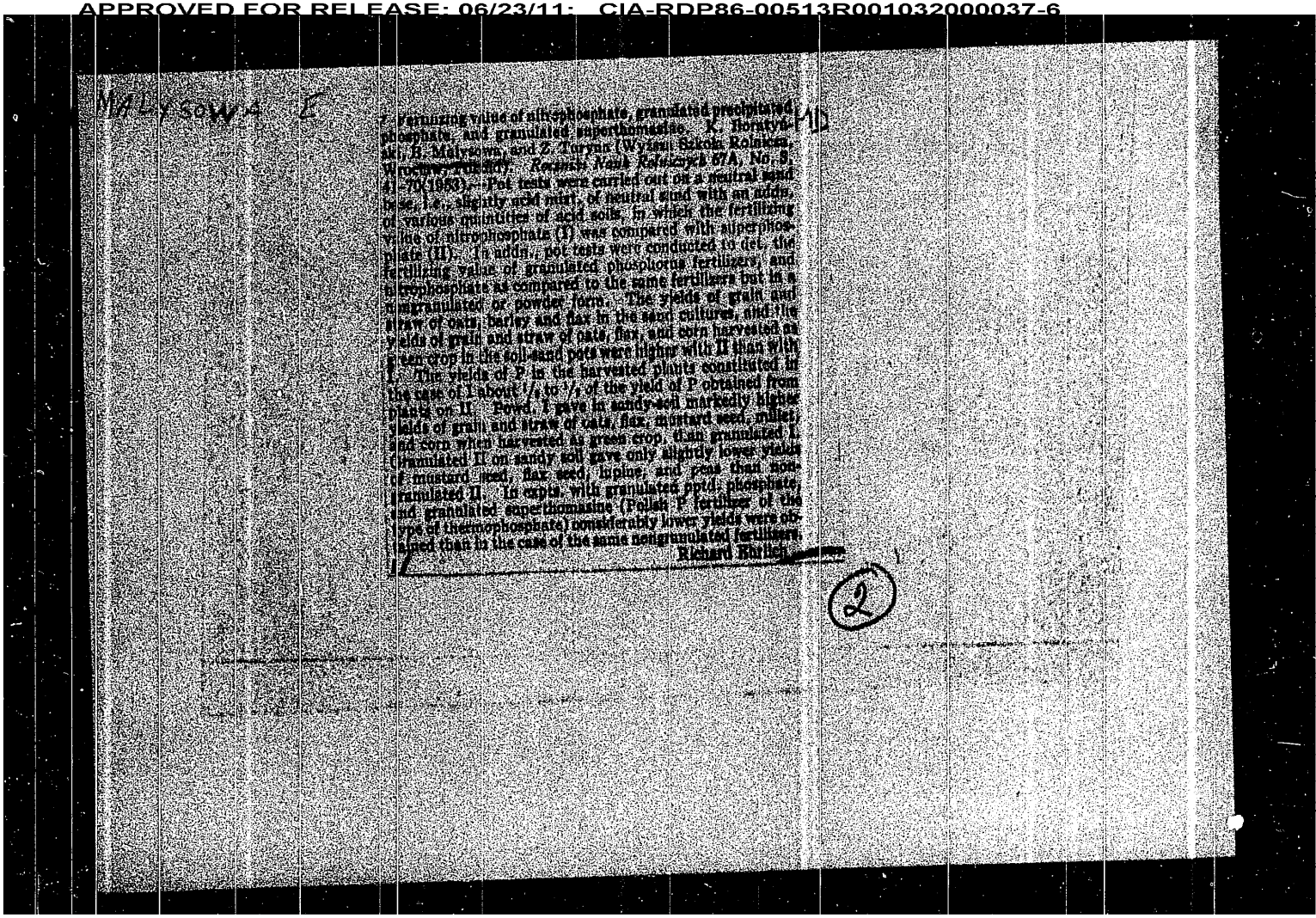

Mar Sow

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2 Fertilizing value of nitrophosphate, granulated precipitated phosphate, and granulated superthomasine. K. Horatyn-ski, E. Malyszewa, and Z. Turyna (Wyzsza Szkola Rolnicza, Wroclaw, Poland). *Rocznicki Nauk Rolniczych* 67A, No. 3, 41-70(1953).—Pot tests were carried out on a neutral sand base, i.e., slightly acid marl, of neutral sand with an addn. of various quantities of acid soils, in which the fertilizing value of nitrophosphate (I) was compared with superphosphate (II). In addn., pot tests were conducted to det. the fertilizing value of granulated phosphorus fertilizers, and nitrophosphate as compared to the same fertilizers but in a nongranulated or powder form. The yields of grain and straw of oats, barley and flax in the short cultures, and the yields of grain and straw of oats, flax, and corn harvested as green crop in the full-sand pots were higher with II than with I. The yields of P in the harvested plants constituted in the case of I about 1/4 to 1/3 of the yield of P obtained from plants on II. Powd. I gave in sandy-soil markedly higher yields of grain and straw of oats, flax, mustard seed, millet, and corn when harvested as green crop, than granulated I. Granulated II on sandy soil gave only slightly lower yields of mustard seed, flax seed, lupine, and peas than nongranulated II. In expts. with granulated pptd. phosphate, and granulated superthomasine (Polish P fertilizer of the type of thermophosphate) considerably lower yields were obtained than in the case of the same nongranulated fertilizers.

Richard Burlich

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85-8-2/18

Please, Mother Country, Accept the Gifts Your Winged Sons (Cont.)

in the Methodology of Training at the Young Technicians Center of the Kabardino-Balkar ASSR, extolls the success of a competition of high school students of the Republic in aircraft model building. One photo. The unsigned reporter's note from Moscow relates a record glider flight accomplished by A.Teplykh, Pilot-Instructor in Gliding at the Central DOSAAF School for Gliding and Helicopter Sports. The pilot is said to have covered 310 km in 7 hours of uninterrupted flight. The flight has assertedly been attempted to celebrate the 40th anniversary of the October Revolution. One photo.

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MALYSHKOV, V.

85-8-2/18

AUTHORS: Pisarevskiy P., Pisarev, P., Shcherbak, A., Malyshkov, V.

TITLE: Please, Mother Country, Accept the Gifts Your Winged Sons Offer You on the Great Anniversary (Primi, otchizna, v chest' velikoy daty podarki ot synov tvoikh krylatykh)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 8, pp. 2-3 (USSR)

ABSTRACT: The article consists of four signed letters from various parts of the USSR, and one unsigned reporter's note from Moscow, all glorifying various recent achievements of the local sport organizations. The only information of possible value is contained in the letter from Leningrad: Students A. Avilov, M. Korsakov, and O. Alekseyev, and Aspirant V. Bokiya, of the Institute for Building Aviation Instruments (Institut aviatsionnogo priborostriyeniya), are said to be working on a system of small-size radio equipment for remote multiple simultaneous control of aircraft models; crystal triodes are used. According to the author of the letter, the construction of the equipment is almost finished. The letter from Khabarovsk, signed by P. Pisarevskiy, a

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MALYSHKOV, V. (g. Nal'chik)

Correspondence club for airplane modelers. Kryl.rod. 7 no.1: 14 Ja '56. (MLRA 9:5)

1. Metodist respublikanskoy stantsii yunykh tekhnikov Kabardinskoy ASSR.

(Airplanes--Models)

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and worked out a program of remedial measures which was approved by the Ministry of the Chemical Industry. The program specified construction of new plants and intensification in production of existing plants. Short-term measures in the fertilizers industry include: development of new production processes for mixed and high-analysis fertilizers from the wet-process phosphoric acid and ammonium phosphates, and for granulated mixed fertilizers on a superphosphate base; pilot-plant production of polyphosphoric acid, as the base for high-analysis solid and liquid mixed fertilizers; development of microfertilizers; modernization of transport of raw phosphates; a new system of production of fluorine-free phosphates on the base of phosphoric acid made by the furnace process; enlargement of the selection of fluorine and fluosilicate compounds on the base of fluorine gas, a by-product of phosphate fertilizers; and development of phosphorus production.

A series of measures were also recommended for modernizing and increasing the production of sulfuric acid and some other inorganic chemicals, e.g., boric acid and borax, chromium, fluorine and barium compounds.

Orig. art. has: 3 figures. [ATD PRESS: 5080-F]

SUB CODE: 07, 05 / SUBM DATE: none

awm

Card 2/2

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 04630-67 EWT(1) RO

ACC NR: AP6031405 (A) SOURCE CODE: UR/0064/66/000/009/0008/0012

AUTHOR: Malyshkov, P. S.

35
34
B

ORG: none

TITLE: Problems of the workers of the basic chemical industry in connection with implementation of the resolutions of the 23rd Congress of the CPSU

SOURCE: Khimicheskaya promyshlennost', no. 9, 1966, 8-12

TOPIC TAGS: chemical industry, chemical conference, fertilizer, phosphoric acid, phosphate

ABSTRACT: The highlights of the new five-year plan (1965-1970) for development of the basic chemical industry and of chemical fertilizers in particular, are outlined. The plan as adopted by the 23rd Congress of the CPSU specified considerable increases in the production of basic chemicals, sulfuric acid, high-analysis and mixed chemical fertilizers. A substantially enlarged selection and better quality of phosphorus fertilizers were planned for 1970 as a result of increased production of high-analysis fertilizers. A Conference of the Workers of the Phosphorus Fertilizers Industry was held in May 1966 in Voskresensk to implement the resolutions of the 23rd Party Congress with respect to improving the quality of fertilizers. The Conference noted present shortcomings in the industry of phosphorus fertilizers

Card 1/2 UDC: 547.624.07

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MALYSHKOV, M.M.

Electron yarn cleaner. Tekst. prom. 25 no.10:39-41 O '65.
(MIRA 18:10)

1. Zamestitel' glavnogo mekhanika fabriki "Proletarskiy trud".

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYSHKOV, M.M.; METLIN, A.N. [deceased]

Device for fiber illumination on spinning and twisting machines. Tekst. prom. 25 no.4:27-29 Ap '65. (MCRA 18:5)

1. Zamestitel' glavnogo mekhanika fabriki "Proletarskiy trud" (for Malyshkov). 2. Glavnyy mekhanik fabriki "Proletarskiy trud" (for Metlin).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 21406-66
ACC NR: AP6009835

circuits. In one stable state, the load is switched to the power supply, and in the other, the load is shorted by the power transistors. For simplification, each transistor pair is serially coupled and each transistor of the pair has a different admittance. Two resistors (5, 6) placed between the bases of the control transistors and the collectors of power transistors form four positive voltage feedback loops between the unpaired transistors. Orig. art. has: 1 figure. [BD]

SUB CODE: 09/ SUBM DATE: 24Sep64/ ATD PRESS: 422/

Card 2/2 ULR

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 21406-66 EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AP6009835 SOURCE CODE: UR/0413/66/000/004/0030/0030

43
B

INVENTOR: Konev, Yu. I.; Malyshkov, G. M.

ORG: none

TITLE: Transistorized switching flip-flop. Class 21, No. 178855

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 30

TOPIC TAGS: computer circuit, flip flop circuit, transistorized circuit

ABSTRACT: The bistable transistorized circuit shown in Fig. 1 consists of two control transistors (1, 2), two power transistors (3, 4), and diodes in the emitter

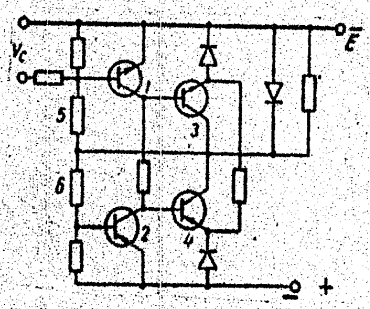

Fig. 1. Bistable transistorized circuit

Card 1/2 UDC: 621.374.3

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYSHKO, V.M.

Determination of the cost of one ton of normal steam. Trudy Len. khim.-farm. inst. no.14:307-311 '62 (MIRA 17:2)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MUKHAMEDOVA, L.A.; MALYSHKO, T.N.; SHAGIDELLIN, R.R.

Reaction of 1-vinyl-3-cyclohexene dioxide with alcohols. Dokl. AN SSSR 160 no.6:1323-1326 F '65.

(MIRA 18:2)

1. Institut organicheskoy khimii AN SSSR, Kazan'. Submitted June 12, 1964.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MUKHAMEDOVA, L.A.; KUDRYAVTSEVA, M.I.; BAYBUROVA, M.Kh.; MALYSHKO, T.M.; LEPLYANIN, G.V.

Some derivatives of 4,5-epoxyhexahydrophthalates. Neftekhimiia 2 no.3:372-377 My-Je '62. (MIRA 15:8)

1. Institut organicheskoy khimii AN SSSR, Kazan'.
(Epoxy compounds) (Phthalic acid)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MUKHAMEDOVA, L.A.; BAYBUROVA, M.Kh.; MALYSHKO, T.M.; KUDRYAVTSEVA, M.I.

Synthesis and properties of dialkylepoxyhexahydrophthalates.
Neftekhimiia 1 no.1:88-92 Ja-F '61. (MIRA 15:2)

1. Institut organicheskoy khimii AN SSSR, Kazan'.
(Esters) (Phthalic acid)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYY, P.V.; MALYSHKO, I.S.

Unit for pouring concentrated acids. Shor.rats.predl.vnedr.v proizv. no.1:51-52 '61. (MIRA 14:7)

1. Yuzhnotrubnyy metallurgicheskiy zavod.
(Acids--Handling and transportation)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

ACC NR: AP6036350 SOURCE CODE: UR/0381/66/000/004/0091/0093

AUTHORS: Arustamov, G. A.; Malyshko, I. M.; Danilov, V. P.; Shapovalov, P. F.

ORG: VNIINK, Kishinev

TITLE: New ultrasonic defectoscopes DUK-11IM and DUK-13IM for quality control of welded joints

SOURCE: Defektoskopiya, no. 4, 1966, 91-93

TOPIC TAGS: weld defect, ultrasonic inspection, ultrasonic flaw detection, defectoscope/ DUK-11IM defectoscope, DUK-13IM defectoscope

ABSTRACT: Defectoscope models DUK-11IM and DUK-13IM, developed by VNIINK for either portable or production operation in quality control of welded joints, are described. The model 11 is packaged in one unit (197 x 278 x 330 mm, 9.8 kg), while the model 13 consists of three interconnected units (the defectoscope - 110 x 233 x 274 mm, 4 kg; the power supply and the accumulator power supply - unspecified size). Both models operate at 1.8 and 2.5 Mc, have a minimum sensitivity of 2 mm^2 (equivalent area of defect), and have straight and slanted detector heads (to introduce waves at 30, 40, and 50°). The model 11 has a maximum penetration of 750 mm (in steel) and the model 13 has 600 mm. Both are equipped with electronic depth meters to pinpoint the defect coordinates. Schematic diagrams of the operational blocks of the defectoscopes are presented, and prices of the defectoscopes are given. Orig. art. has: 4 figures and 1 table.

SUB CODE: 13/ SUBM DATE: 14Mar66

Card 1/1

UDC: 620.179.16

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

PURIM, Ya.A., kand. tekhn. nauk; KALININ, V.I., konstruktor; MALYSHKO, I.M., mladshiy nauchnyy sotrudnik

Modernized instrument for the automatic recording of the heat resistance of fur and leather. Nauch. issl. trudy NIIMP no.12: 83-88 '63. (MIRA 17:11)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYSHKO, I. (Moskva); KURSEKOV, Yu.

Building the KVN-49 television set to receive the second television program. Radio no.8:49 Ag '56. (MLRA 9:10)
(Television--Receivers and reception)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

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L 00062-66

ACCESSION NR: AP5021346

ENCL: 01

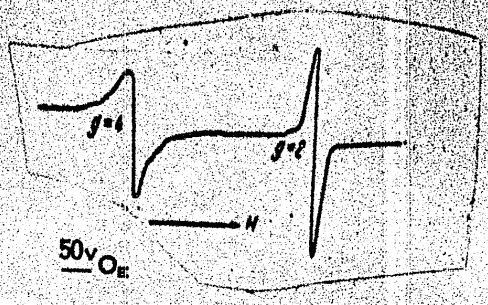

Fig. 1. Signal from the peroxidized radical in teflon, recorded simultaneously with the standard (glass "Luch 2").

Card 3/3

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 00062-66
ACCESSION NR: AP5021346

help during accelerator work." Orig. art. has: 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR, Moscow (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 21May64 ENCL: 01 SUB CODE: OP, NP

NO REF SOV: 002 OTHER: 001

Card 2/3

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

L 00062-66 EWT(l)/EPF(c)/EPA(w)-2/EWA(m)-2 IJP(c) WW/GG/AT

ACCESSION NR: AP5021346 UR/0120/65/000/004/0134/0135

539.18

44,55 44,55 44,55 68 65 B

AUTHOR: Blazhevich, I. N.; Buben, N. Ya.; Malyshko, A. N.

TITLE: A device for the detection of electron paramagnetic resonance 21,44,55 spectra at the 21 cm wavelength during fast electron exposures

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 134-135

TOPIC TAGS: electron paramagnetic resonance, electron paramagnetic spectrometer, electron radiation, ionizing radiation

ABSTRACT: During the study of free radicals formed in the course of exposure of matter to ionizing radiations the authors used, in addition to another device, a spectrometer allowing the observation of electron paramagnetic resonance spectra of radicals in weaker magnetic fields. This article describes this instrument which functions on the 21 cm wavelength appearing during the exposure of matter to fast electrons. The electron beam is introduced along the axis of the solenoid producing the magnetic field. The temperature of the sample can vary between -180 and +100C. Typical signals are shown in Fig. 1 of the Enclosure. "The authors thank A. G. Semenov for valuable advice and A. V. Gusev for his

44,55 44,55

Card 1/3

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MALYSHKINA, M.P., meditsinskaya sestra (Tomsk); ORSKIY, A.D.(Tarusa Kaluzhskoy oblasti)

They do not grow old. Zdorov'e 2 no.11:15 N '56. (MLRA 10:1)
(OLD AGE PENSIONS)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

BOROVSKIY, E.V.; MALYSHKINA, M.A.; KOTENKO, T.V.; SOLOV'YEV, S.N.

New antifungal antibiotic mycoheptin from the group of non-aromatic heptaenes. Antibiotiki 10 no.9:776-780 S '65. (MIRA 18:9)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov, Gdan'skiy politekhnicheskiy institut, Pol'skaya Narodnaya Respublika.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

TSYGANOV, V.A.; KONEV, Yu.Ye.; FURSENKO, M.V.; IOFINA, E.I.; AL'BERT, M.M.; MUSTAFOVA, N.N.; VENKOVA, I.B.; SOLOV'YEV, S.N.; MALYSHKINA, M.A.; BOGDANOVA, N.P.; KOTENKO, T.V.; FILIPPOVA, A.I.

Isolation and characteristics of actinomycetes producing the antibiotic trichomycin. Antibiotiki 9 no.4:291-296 Ap '64.
(MIRA 19:1)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYSHKINA, M.A.; BELEN'KIY, B.G.; SOLOV'YEV, S.N.

Study of the physicochemical properties of antibiotic 26/1 (levorin). Antibiotiki 8 no. 11:999-1002 N '63. (MIRA 17:9)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

MALYSHKINA, M.A.; BELEN'KIY, B.G.; SOLOV'YEV, S.N.

Chemical purification of antibiotic 26/1 (levorin). Antibiotiki 8 no.7:584-588 Jl'63 (MIRA 17:3)

1. Leningradskiy nauchno-issledovatel'skiy institut antibiotikov.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6

SOLOV'YEV, S.N.; BELEN'KIY, B.G.; PETROVA, L.Ya.; MALYSHKINA, M.A.; OVCHAROV, V.G.

Chemistry of the polyene antibiotics. Report No.3: Purifying antibiotic 26/1 of amine admixtures. Eksp. i klin. issl. po antibiot. 2:263-267 '60. (MIRA 15:5)
(ANTIBIOTICS) (AMINES)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000037-6